REVISIONS "082 01633			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 2141	1-20-67	
B	REVISED PER TDRR 2850	1-[illegible]-67	
C	REVISED PER TDRR 2973	2-[illegible]-67	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.12 R
.12
2 PLACES

.100
.697
.696
30° TYP
2.150
2.130
.748
.746
.135
.115 TYP
.270
.260

.110
.090
.385
.365
.000
.015 R
L.570
32
.0005 IN/IN
.160

3.450
.710
.690
.570
.100
.285
CUTOUT THRU
1.070
REF
.812
.618
1.625
1.237
.100 TYP
.140 DIA
.260
.240 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE
GAGE POINT
.729
.2192
.2187
30°
5°0'±0°15'
.040
.060
TYP
30°
.477
30°
.040
.060 BLEND WITH .12 R
5°

VIEW A
SCALE 2/1

.000
.030 R TYP
.094 R MAX PERMISSIBLE
.781
.125

-B-
⊥ C .004
63
.447
.427
.181
.060
.330
.310
.25 TYP
45° TYP
CUTOUT THRU
.125
3.010
2.090
2.227
.000
.030 R
32
-C-
.005
32
.12
3 PLACES
.005 R MAX PERMISSIBLE
.16 R
2 PLACES
SEE VIEW A
.487
.491 (FROM GAGE POINT)
.125

.069
.075 DIA 45 PLACES
⌖ .004 DIA
B .002
8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
.710
.690
4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE
.094 R
9 EQUAL SPACES AT
.200 ±.002 PITCH TOTAL
1.800 ±.002 TOLERANCE
NON-CUMULATIVE
2.450
BSC
1.112
.040
.060 x 45° ±5°
2 PLACES
BLEND WITH
.12 R
.574 BSC
.312 BSC
5 EQUAL SPACES
AT .200 ±.002 PITCH
TOTAL 1.000 ±.002
TOLERANCE NON-
CUMULATIVE
.136
.140 DIA 60 PLACES
⌖ .004 DIA

.030 R MAX PERMISSIBLE
ONE PLACE ONLY
CUTOUT THRU
.520
.500
.385
.365
1.000
1.020
.000
.015 R
4.260
REF
3.700
.188
.570
.550
.595
.575
DIMENSION FOR
STEP ONLY
.610
.595
.062 x 45° TYP
.030 R

G
G

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

C
B
A
E
E
A
B
C
.406
.812
.562
1.135
1.125
.813
.811
1.625
1.070
2.150
2.130 REF

.430
.400

SECTION F-F

-D- -E-

PARTIAL SECTION G-G
SCALE : 2:1

.729 REF
16.7195
16.7165 (FROM GAGE POINT)
17.488
17.468

.015 R MAX PERMISSIBLE

SECTION E-E

.186 DIA
.150 C'SK 100° X .330
.210
.2270
.2265
5°0'±0°15'

SECTION A-A
2 PLACES

.248
2
.165 DIA THRU
.169
10-32UNF-2B THRU
82° ±1° C'SK, .189
.199 DIA
⌖ .005 DIA
SEE NOTES 6 & 8
5°

SECTION B-B
2 PLACES

.272 DIA
C'BORE .406 DIA X .142 DEEP
.281
.250
.246
5°
.245
5°
.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ALL SURFACES TO BE PLATED. COPPER PLATE PER MIL-C-14550, CLASS 2, THEN ELECTROLESS NICKEL PLATE PER MIL-C-26074A, CLASS I. ALL DIMENSIONS TO, AND FINISHES OF, PLATED SURFACES APPLY AFTER PLATING. FINISH MACHING AFTER PLATING IS PERMISSIBLE AS LONG AS MINIMUM SPECIFIED THICKNESS OF NICKEL PLATE REMAINS. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MIT INSTRUMENTATION LAB Cambridge Mass.
TOLERANCES ON FRACTIONS DECIMALS ANGLES .XX ±.02 .XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	DRAWN E. Johnson DATE
MATERIAL SEE NOTE 2	CHECKED
HEAT TREATMENT —	APPROVAL
FINAL FINISH SEE NOTE 6	APPROVAL
NEXT ASSY / APPLICATION	USED ON
	NASA APPROVAL
	MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 9

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008109

SCALE 1/1 WT SHEET 1 OF 2

1008109 C

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED 22430	2-4-63	[illegible]
C	REVISED PER TDRR 02737	8-21-63	[illegible]

13.686
10.625
8.266
8.125
3.156

2.814 / 2.810
2.534 / 2.530
2.033 / 2.029
1.158 / 1.154
.142 / .138
4 EQUAL SPACES AT .127 = .502 / .123 = .498 TOLERANCES NON-CUMULATIVE 8 PLACES
3 EQUAL SPACES AT .127 = .377 / .123 = .373 TOLERANCES NON-CUMULATIVE 8 PLACES
.283 / .279
.062

2.158 / 2.154
16 EQUAL SPACES AT .127 = 2.002 / .123 = 1.998 TOLERANCES NON-CUMULATIVE
.080 / .076
1.877 / 1.873
.143 / .139
.128

1.940 / 1.936
13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623 TOLERANCES NON-CUMULATIVE
.158 / .154
.128

2.752 / 2.748
21 EQUAL SPACES AT .127 = 2.627 / .123 = 2.623 TOLERANCES NON-CUMULATIVE
.084 / .080
2.471 / 2.467
.143 / .139
.128

2.283 / 2.279
2.002 / 1.998
1.002 / .998
.062
.518 / .514
10 EQUAL SPACES AT .127 = 1.252 / .123 = 1.248 TOLERANCES NON-CUMULATIVE
1.243 / 1.239
.259 / .255

.125 R 8 PLACES
.348 / .342
.455 / .451
8 EQUAL SPACES AT .127 = .627 / .123 = .623 TOLERANCES NON-CUMULATIVE
.859 / .854
10 EQUAL SPACES AT .127 = 1.252 / .123 = 1.248 TOLERANCES NON-CUMULATIVE
.252 / .248
10 EQUAL SPACES AT .127 = 2.252 / .123 = 2.248 TOLERANCES NON-CUMULATIVE

1.467 / 1.463
1.592 / 1.588
.127 / .123
.797 / .793
.125 R 2 PLACES
1.221 / 1.217
2.096 / 2.092
.125
.062
.062 R 16 PLACES
.867 / .863
1.847
1.696

.081 / .085 DIA THRU 20 PLACES
.069 DIA THRU / .073 232 PLACES
.183 / .187 .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 21 PLACES

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936
.158 / .154
13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.938
.158 / .154
13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936
.158 / .164
.142 / .138
13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936
.377 / .373
3.096 / 3.091
21 EQUAL SPACES AT .127 = 2.627 / .123 = 2.623 TOLERANCES NON-CUMULATIVE
3.377 / 3.373
3.562
5.703
7.828
9.953
12.078

H

.080 14 PLACES
.074 / .066

SECTION H-H

VIEW B-B
SCALE: 2:1

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX = .03 .XXX = .005 ANGLES ±30'
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINISH —
NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN E. Blasso DATE 8-8-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008109
SCALE 2:1 | WT | SHEET 2 OF 2

1008109 C

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS TDRR 01633 DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR -2141	7-24-68	GS WH
B	REVISED PER TDRR -2438	8-7-68	J.W. WH
C	REVISED PER TDRR 2273	9-26-68	AP WH
D	REVISED PER TDRR 3508	11-5-68	BM WH

SECTION D-D

SECTION F-F

VIEW A
SCALE 2/1

PARTIAL SECTION G-G
SCALE : 2:1

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002196. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1 & FIND NO. 2 WITH MIL-P-8585 WET ZI C CHROMATE PRIMER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 XXX ±.005 ANGLES 0° 30' DO NOT SCALE THIS DRAWING	MATERIAL SEE NOTE 2	HEAT TREATMENT —	FINAL FINISH SEE NOTE 6
NEXT ASSY	USED ON	APPLICATION	

MIT INSTRUMENTATION LAB — MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN — DATE — CHECKED — APPROVAL — APPROVAL

NASA APPROVAL — MIT APPROVAL

FRAME, TRAY 9

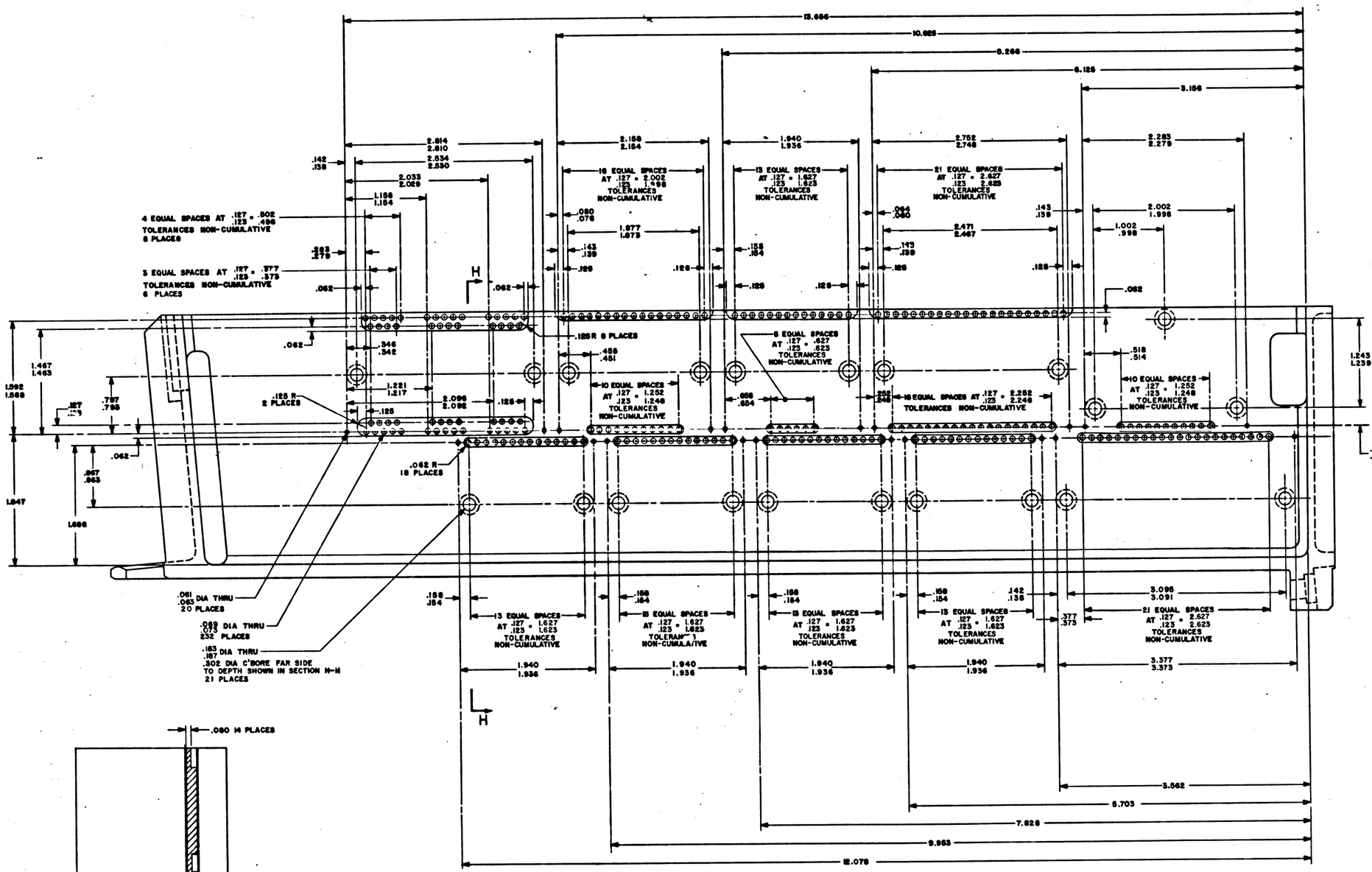
CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008109

SCALE 1/1 — WT — SHEET 1 OF 2

1008109 D

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED USP 30	[illegible]	[illegible]
C	REVISED PER TDRR 02731	5-2-03	[illegible]
D	REVISED PER TDRR 03992	9-15-03	[illegible]



VIEW B-B
SCALE: 2:1

SECTION H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

MIT INSTRUMENTATION LAB Cambridge, Mass.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± .XX = .06 .XXX = .005 DECIMALS ANGLES ±30' DO NOT SCALE THIS DRAWING

MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

NEXT ASSY | USED ON | APPLICATION

DRAWN E. Blaney DATE 9/15/03
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109
SCALE 2:1 | WT | SHEET 2 OF 2

1008109 D

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS TORR 01635			
ZONE	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 32181	7-24-63	GT. WR
B	REVISED PER TDRR 32830	8-26-63	JM GK
C	REVISED PER TDRR 02731	9-26-63	AD JM
D	REVISED PER TDRR 32982	11-5-63	BPR MC
E	REVISED PER TDRR 03296	2-10-64	JM
F	REVISED PER TDRR 03297	4-9-64	JM

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

CUTOUT THRU

.140 DIA
.260 DIA SPOTFACE
.240
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.125 MAX.

.0003 MAX. STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

SECTION H-H
SCALE 2/1

.069
.075 DIA 45 PLACES
⌖ .004 DIA

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT
.200 ±.002 PITCH TOTAL
1.800 ±.002 TOLERANCE
NON-CUMULATIVE

4-40 UNC-3B TAP
AFTER ANODIZING

5 EQUAL SPACES
AT .200 ±.002 PITCH
TOTAL 1.000 ±.002
TOLERANCE NON-
CUMULATIVE

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

.125 DIA x .19 DEEP
2 PLACES FOR
MACHINING LOCATION

DIMENSION FOR
STEP ONLY

.062 x 45° TYP

.030 R

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER
PERMANENT MARKING FOR
PROCESSING PERMITTED
IN THIS AREA. ELECTRO-
CHEMICAL ETCH .12 HIGH
CHARACTERS LOCATE
CENTRALLY

SECTION F-F

PARTIAL SECTION G-G
SCALE : 2:1

SECTION E-E

.729 REF
16.7195
16.7165 (FROM GAGE POINT)
17.488
17.468

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002196. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1& FIND NO. 2 WITH MIL-P-8585 WET ZI C CHROMATE PRIMER.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THRE[illegible] SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
XX ±.02
XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
—
FINAL FINISH
SEE NOTE 6
NEXT ASSY | USED ON
APPLICATION

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN [illegible] DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

FRAME,
TRAY 9

CODE IDENT NO. | SIZE | NASA DRAWING NO.
E | 1008109

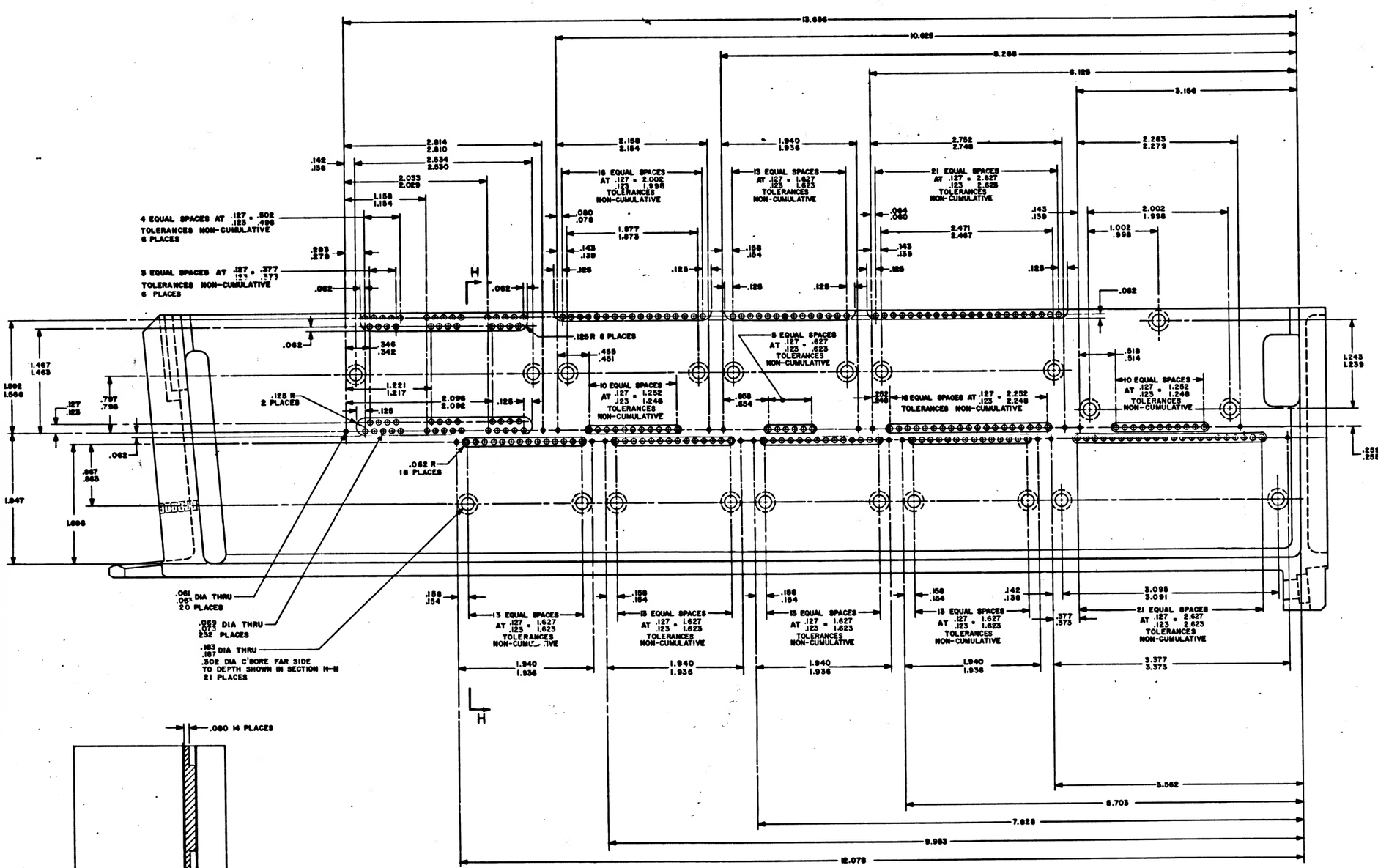
SCALE 1/1 | WT | SHEET 1 OF 2

MASTER

INCHES
0 1
PHOTOGRAPHIC SCALE ONLY

1008109 F

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED CR68-0058	7-2-68	
C	REVISED PER TDRR 027731	8-13-68	
D	REVISED PER TDRR 028821	9-16-68	
E	REVISED PER TDRR 033496	7-14-69	
F	REVISED PER TDRR 035297	9-4-69	



QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES = XX± .02 XXX± .005 0°30'
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN E. Blanas DATE 7-2-68
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109
SCALE 2:1 | WT | SHEET 2 OF 2

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

REVISIONS TDRR 01625			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02741	7-24-67	[illegible]
B	REVISED PER TDRR 02850	8-7-67	[illegible]
C	REVISED PER TDRR 03231	8-24-67	[illegible]
D	REVISED PER TDRR 03283	9-15-67	[illegible]
E	REVISED PER TDRR 03296	9-29-67	[illegible]
F	REVISED PER TDRR 03297	9-29-67	[illegible]
G	REVISED PER TDRR 03781	1-18-68	[illegible]

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.000 R .018
.12 R
.100
.12
.697 .696
2.150 2.130
.748 .746
30° TYP
.135 .115 TYP
1.270 1.260
.110 .090
1.570
.32
.0005 IN/IN
.160
.385 .365
.000 R .015

3.450
.710 .690
.570
.100
.285
1.070 REF
.812
.618
1.625
1.237
.100 TYP
CUTOUT THRU
.140 DIA
.260 .240 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE
GAGE POINT
.729
.220 .218
30°
5° 0' ± 0° 15'
.040 .060 TYP
30°
.477
30°
.040 .060 BLEND WITH .12 R
5°

VIEW A
SCALE 2/1

.000 .030 R TYP
-F-
.094 R MAX PERMISSIBLE
CUTTER RADIUS
.781
.125
.125 MAX.
-B-
⊥ C .004
.0003 MAX. STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.000 .018 R
.062

SECTION H-H
SCALE 2/1

.072 .073 DIA 45 PLACES
⌖ .004 DIA
⌖ B .002
.447 .427
.181
.080
.330 .310
.25 TYP
45° TYP
8 EQUAL SPACES AT .125 ± .002 PITCH
TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE
CUTOUT THRU
4 EQUAL SPACES AT .125 ± .002
PITCH TOTAL .500 ± .002
TOLERANCE NON-CUMULATIVE
.710 .690
.094 R
3 EQUAL SPACES AT
.200 ± .002 PITCH TOTAL
1.800 ± .002 TOLERANCE
NON-CUMULATIVE
2.450 BSC
.155 .145
1.112
.312 BSC
.625
.040 .060 x 45° ± 5°
2 PLACES
BLEND WITH .12 R
.574 BSC
5 EQUAL SPACES AT .200 ± .002 PITCH
TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE
4-40 UNC-3B TAP
AFTER ANODIZING
.137 .139 DIA 60 PLACES
⌖ .004 DIA
.125
3.010 2.890
2.227
.000 .030 R
-C-
.005
32
SEE VIEW A
.487 .491 (FROM GAGE POINT)
.062
.094
.125
.12 3 PLACES
.005 R MAX PERMISSIBLE
.16 R 2 PLACES

.030 R MAX PERMISSIBLE
ONE PLACE ONLY
CUTOUT THRU
.520 .500
.385 .365
1.000 1.020
.000 .015 R
.080
.125 DIA x .19 DEEP
2 PLACES FOR
MACHINING LOCATION
4.260 REF
3.700
.188
.570 .550
.595 .575
DIMENSION FOR
STEP ONLY
.084
.610 .596
.062 x 45° TYP
.030 R
.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

C B A E
E A B C
.406
.812
.562
1.135 1.125
1.813 1.811
1.625 1.623
1.070
2.150 2.130 REF

.430 .400

SECTION F-F

-D- -E-

PARTIAL SECTION G-G
SCALE : 2:1

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.488 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUS THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1 & FIND NO. 2 WITH MIL-P-8585 WET ZI C HROMATE PRIMER.

.186 .150 DIA
CSK 100° X .330 .310
.228 .226
5° 0' ± 0° 15'

SECTION A-A
2 PLACES

.248
2
.165 .169 DIA THRU
10-32UNF-2B THRU
82° ± 1° CSK, .189 .195 DIA
⌖ .005 DIA
SEE NOTES 6 & 8
5°

SECTION B-B
2 PLACES

.272 DIA
C BORE .406 DIA x .142 DEEP
.281
.250 .246
5°
.245
5°
.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES 1/4 XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge Mass.
MATERIAL SEE NOTE 2	DRAWN [illegible] DATE [illegible]
HEAT TREATMENT —	CHECKED
FINAL FINISH SEE NOTE 6	APPROVAL [illegible] 11-14-67
NEXT ASSY USED ON APPLICATION	APPROVAL
	NASA APPROVAL [illegible]
	MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 9

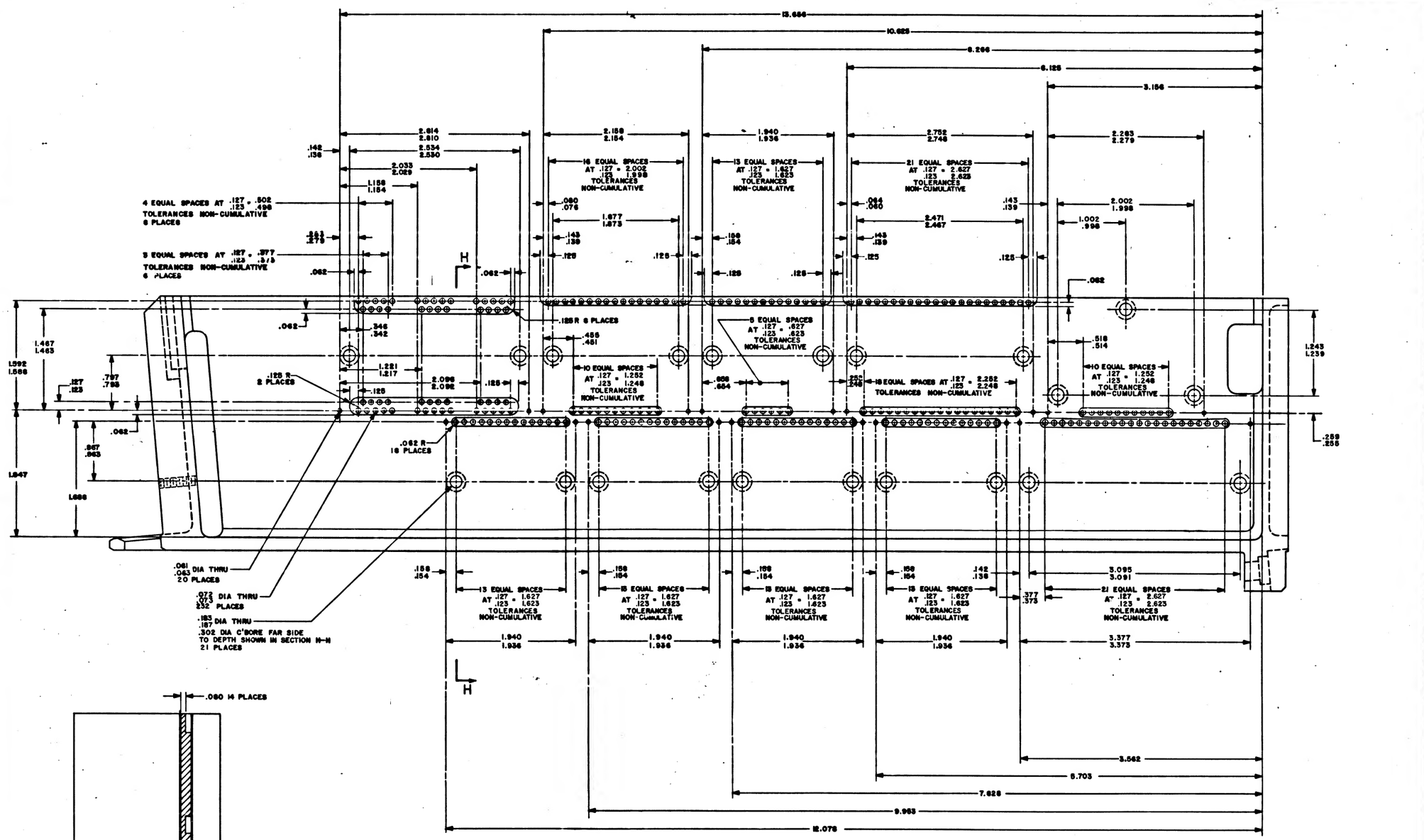
CODE IDENT NO. E | SIZE | NASA DRAWING NO. 1008109

SCALE 1/1 | WT | SHEET 1 OF 2

1008109

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED 02490	7-28-65	
C	REVISED PER TDRR 02737	8-10-65	
D	REVISED PER TDRR 02882	9-1-65	
E	REVISED PER TDRR 03296	9-9-65	
F	REVISED PER TDRR 03697	9-9-65	
G	REVISED PER TDRR 03781	9-28-65	



REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 .XX± .02 ±30' .XXX± .005
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINISH —
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN E. Hasse DATE 7-28-65
CHECKED
APPROVAL
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109
SCALE 2:1 | WT | SHEET 2 OF 2

MASTER

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

1008109

REVISIONS TO 82 01635			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02481		
B	REVISED PER TDRR 02880		
C	REVISED PER TDRR 02731		
D	REVISED PER TDRR 03282		
E	REVISED PER TDRR 03596		
F	REVISED PER TDRR 03277		
G	REVISED PER TDRR 03781		
H	REVISED PER TDRR		

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.000 R .018
.12 R
H
.110 .090
.000 R .015
.005 IN/IN
.160
.385 .365
.32
L.570

.100
.12
.12 R
2.150 2.130
.697 .696
.748 .746
30° TYP
.135 .115 TYP
L.270 .260

3.450
.713 .690
.570
.100
.285
CUTOUT THRU
1.070 REF
.812
.618
1.625
1.237
.100 TYP
.140 DIA .260 .240 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE
GAGE POINT
.729
.220 .218
30°
5° 0' ± 0° 15'
.040 .060 TYP
30°
.677
30°
.040 .060 BLEND WITH .12 R
5°
VIEW A
SCALE 2/1

.000 .030 R TYP
-F-
.094 R MAX PERMISSIBLE
CUTTER RADIUS
.711
.126
.125 MAX.
-B-
⊥ C .004
.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.000 .018 R
.062
SECTION H-H
SCALE 2/1

.072 .073 DIA 45 PLACES
Ⓜ B .002
.447 .427
.181
.090
.330 .310
18 TYP
45° TYP
BREAK EDGE THIS SIDE .05
8 EQUAL SPACES AT .125 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE
CUTOUT THRU
.710 .690
4 EQUAL SPACES AT .125 ± .002 PITCH TOTAL .500 ± .002 TOLERANCE NON-CUMULATIVE
.094 R
9 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.800 ± .002 TOLERANCE NON-CUMULATIVE
2.498 2.488
.158 .145
1.112
.040 x 45° ± 5° .060 2 PLACES BLEND WITH .12 R
.314 .310
.625
.574 .572
4-40 UNC-38 SEE NOTE 6
5 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE
.137 .139 DIA 60 PLACES
3.010 2.990
2.227
.000 .030 R
.32
-C-
.005
.32
SEE VIEW A
.497 .491 (FROM GAGE POINT)
.062
.094
.125
.12 3 PLACES
.006 R MAX PERMISSIBLE
.16 R 2 PLACES

.030 R MAX PERMISSIBLE ONE PLACE ONLY
CUTOUT THRU
.520 .500
BREAK 2 EDGES THIS SIDE .05
.385 .365
1.000 1.020
.000 .015 R
4.260 REF 3.700
.050
.125 DIA x .19 DEEP 2 PLACES FOR MACHINING LOCATION
.094
.030 R
.188
.570 .550
.595 .575
DIMENSION FOR STEP ONLY
.610 .596
.062 x 45° TYP

G
G
.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C B A E E A B C
.406
.812
.562
1.135 1.125
.813 .811
1.625 1.623
1.070
2.150 2.130 REF

.430 .400
SECTION F-F

-D- -E-
PARTIAL SECTION G-G
SCALE : 2:1

.015 R MAX PERMISSIBLE
SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND USING 1010729-F ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND USING 1010729-3 CHARACTER TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN

.186 DIA .190 CSK 100° X .230 .210
.220 .226
5° 0' ± 0° 15'
SECTION A-A
2 PLACES

.248
2
.165 .169 DIA THRU
10-32 UNF-2B THRU
82° ± 1° CSK, .185 .189 DIA
.005 DIA
SEE NOTES 6 & 7
5°
SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA x .142 DEEP
.281
.250 .244
5°
.245
.015 R MAX PERMISSIBLE
SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

1007149			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± .02 XX ± .005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

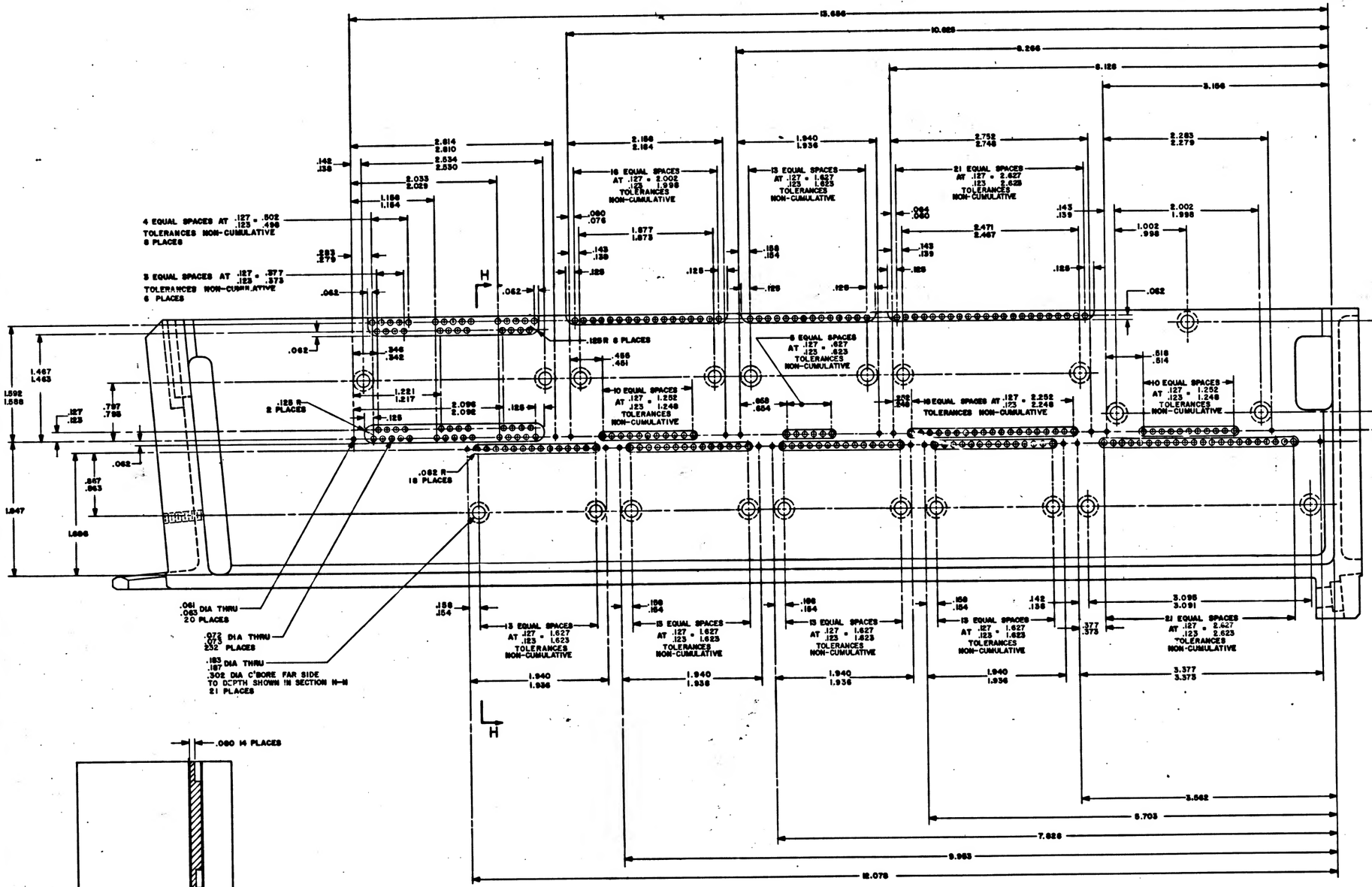
FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109
SCALE 1/1 | WT | SHEET 1 OF 3

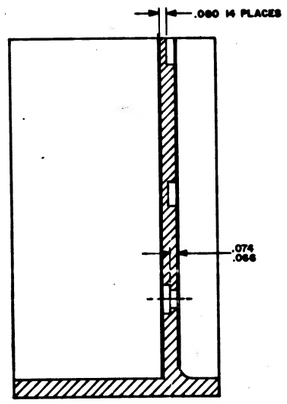
MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED 03730	5-7-63	
C	REVISED PER TDRR 02731	8-8-63	
D	REVISED PER TDRR 02994	9-16-63	
E	REVISED PER TDRR 03496	10-9-63	
F	REVISED PER TDRR 03697	11-19-63	
G	REVISED PER TDRR 03781	12-18-63	
H	REVISED PER TDRR 06206	9-10-64	



VIEW B-B
SCALE: 2:1



SECTION H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FWD NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS X.XX ±.02 X.XXX ±.005 ANGLES ±30'
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH

NEXT ASSY | USED ON | APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN E. Hansel DATE 2-5-63
CHECKED
APPROVED
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

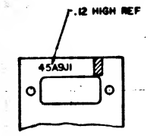
CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109

SCALE 2:1 | WT | SHEET 2 OF 8

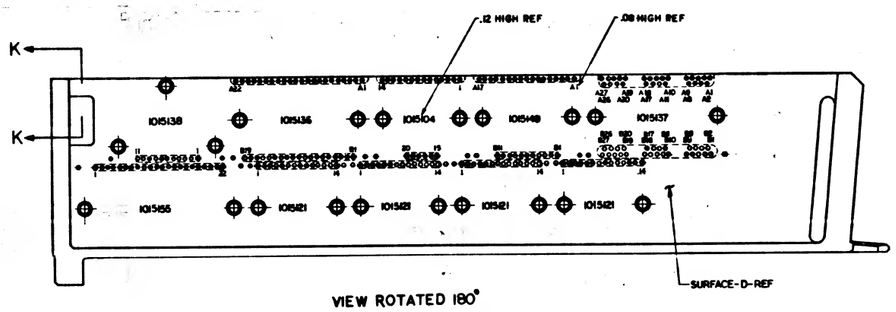
1008109 H

INCHES 0 2 PHOTOGRAPHIC SCALE ONLY

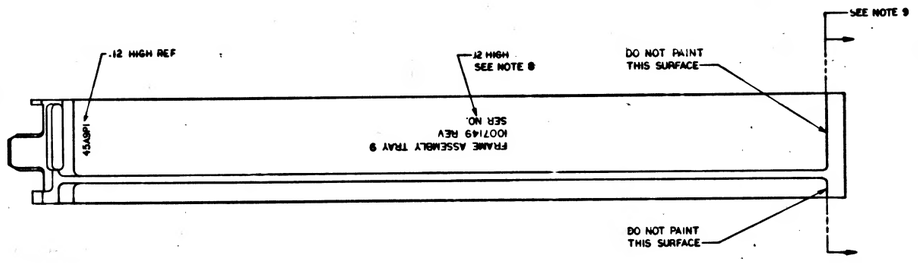
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
H	THIS SHEET ADDED PER TDRR	7/16/68	

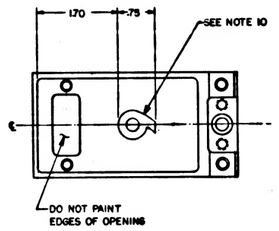


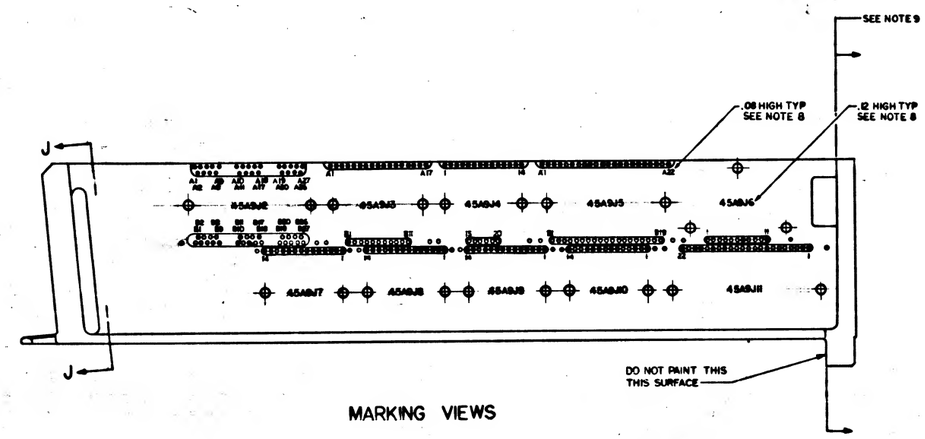
PARTIAL SECTION K-K

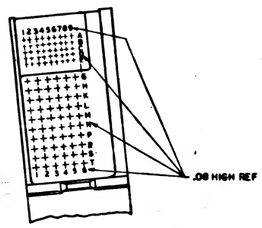


VIEW ROTATED 180°

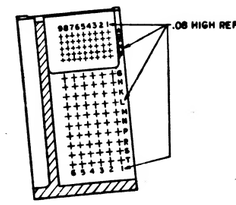








MARKING VIEWS



SECTION J-J

REV H THIS SHEET ADDED

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN [illegible] DATE 4 DEC 67
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008109
SCALE 1/1 | WT | SHEET 3 OF 3

INCHES
PHOTOGRAPHIC SCALE ONLY

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 2141	3-24-65	JT WK
B	REVISED PER TDRR 12938	4-2-65	JT
C	REVISED PER TDRR 02731	6-9-65	JT
D	REVISED PER TDRR 12982	7-1-65	JT
E	REVISED PER TDRR 03296		
F	REVISED PER TDRR 03271	9-9-65	JT
G	REVISED PER TDRR 03781	1-7-66	JT
H	REVISED PER TDRR		
J	REVISED PER TDRR 11319	4-8-66	JT

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE [-D-]
STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE [-F-]

CUTOUT THRU

.140 DIA
.260 DIA SPOTFACE
2 HOLES

SECTION H-H
SCALE 2/1

.072
.073 DIA 45 PLACES

8 EQUAL SPACES AT .125 ± .002 PITCH
TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ± .002
PITCH TOTAL .500 ± .002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT
.200 ± .002 PITCH TOTAL
1.800 ± .002 TOLERANCE
NON-CUMULATIVE

5 EQUAL SPACES
AT .200 ± .002 PITCH
TOTAL 1.000 ± .002
TOLERANCE NON-
CUMULATIVE

#4-40 UNC-3B
SEE NOTE 6

.137
.159 DIA 60 PLACES

BREAK EDGE THIS SIDE .03

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

BREAK 2 EDGES THIS SIDE .03

.005 R MAX PERMISSIBLE

.16 R
2 PLACES

.12
3 PLACES

.062 X 45° TYP

DIMENSION FOR
STEP ONLY

.005 MAX ALLOWABLE STEP ABOVE SURFACE [-E-]
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER
PERMANENT MARKING FOR
PROCESSING PERMITTED
IN THIS AREA. ELECTRO-
CHEMICAL ETCH .12 HIGH
CHARACTERS PER ND1002019
LOCATE CENTRALLY

SECTION F-F

PARTIAL SECTION G-G
SCALE : 2:1

SECTION E-E

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

M I T INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES .XX ±.02 .XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	FRAME, TRAY 9
MATERIAL SEE NOTE 2	
HEAT TREATMENT —	
FINAL FINISH SEE NOTE 6	
1007149 / NEXT ASSY / USED ON / APPLICATION	
DRAWN [illegible] DATE	
CHECKED	
APPROVAL [illegible] 4-19-66	
APPROVAL	
NASA APPROVAL [illegible]	CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008109
MIT APPROVAL [illegible]	SCALE 1/1 WT — SHEET 1 OF 3

1008109

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED 02830	2-26-63	[illegible]
C	REVISED PER TDRR 02737	3-20-63	[illegible]
D	REVISED PER TDRR 02982	3-15-63	[illegible]
E	REVISED PER TDRR 03216	3-29-63	[illegible]
F	REVISED PER TDRR 03287	4-9-63	[illegible]
G	REVISED PER TDRR 03781	6-28-63	[illegible]
H	REVISED PER TDRR 7766	9-27-63	[illegible]
J	REVISED PER TDRR 11319	9-20-65	[illegible]

13.656
10.625
8.268
6.125
3.156

2.814 2.810
2.534 2.530
2.033 2.029
1.158 1.164
.142 .138
.283 .279
2.158 2.154
1.940 1.936
2.752 2.748
2.283 2.279
.080 .078
1.877 1.873
.143 .139
.158 .154
.064 .060
2.471 2.467
2.002 1.998
1.002 .998

4 EQUAL SPACES AT .127 = .502 .123 = .498 TOLERANCES NON-CUMULATIVE 6 PLACES

3 EQUAL SPACES AT .127 = .377 .123 = .373 TOLERANCES NON-CUMULATIVE 6 PLACES

16 EQUAL SPACES AT .127 = 2.002 .123 1.998 TOLERANCES NON-CUMULATIVE

13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE

21 EQUAL SPACES AT .127 = 2.627 .123 2.623 TOLERANCES NON-CUMULATIVE

H

.062

.125

.125 R 8 PLACES

.062

.346 .342

.456 .451

5 EQUAL SPACES AT .127 = .627 .123 = .623 TOLERANCES NON-CUMULATIVE

.518 .514

1.243 1.239

1.467 1.463

1.592 1.588

.127 .123

.797 .793

.125 R 2 PLACES

1.221 1.217

2.096 2.092

.125

10 EQUAL SPACES AT .127 = 1.252 .123 = 1.248 TOLERANCES NON-CUMULATIVE

.656 .654

282 .248

18 EQUAL SPACES AT .127 = 2.252 .123 = 2.248 TOLERANCES NON-CUMULATIVE

10 EQUAL SPACES AT .127 = 1.252 .123 = 1.248 TOLERANCES NON-CUMULATIVE

.259 .255

.062

.867 .863

.062 R 18 PLACES

1.847

1.686

.061 DIA THRU .063 20 PLACES

.072 DIA THRU .073 232 PLACES

.183 DIA THRU .187 .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 21 PLACES

.158 .154

13 EQUAL SPACES AT .127 = 1.627 .123 = 1.623 TOLERANCES NON-CUMULATIVE

1.940 1.936

.142 .138

.377 .373

3.096 3.091

21 EQUAL SPACES AT .127 = 2.627 .123 = 2.623 TOLERANCES NON-CUMULATIVE

3.377 3.373

3.562
5.703
7.828
9.953
12.078

.080 14 PLACES

.074 .066

SECTION H-H

VIEW B-B
SCALE: 2:1

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ± .02 .XXX ± .006 ANGLES ± 0°30'
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY — USED ON — APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN E. Bhasa DATE 2-26-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

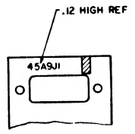
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

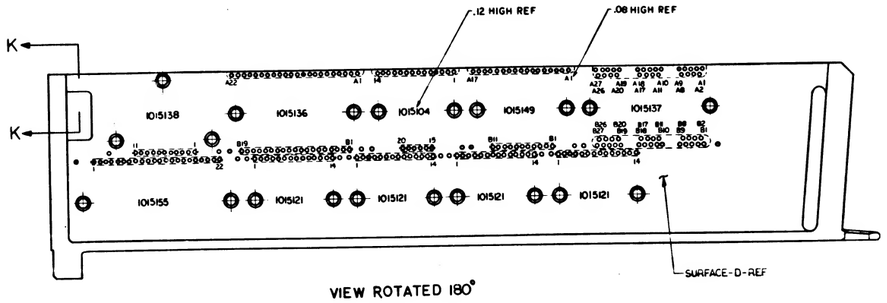
CODE IDENT NO — SIZE E — NASA DRAWING NO 1008109
SCALE 2:1 — WT — SHEET 2 OF 3

J 6018001

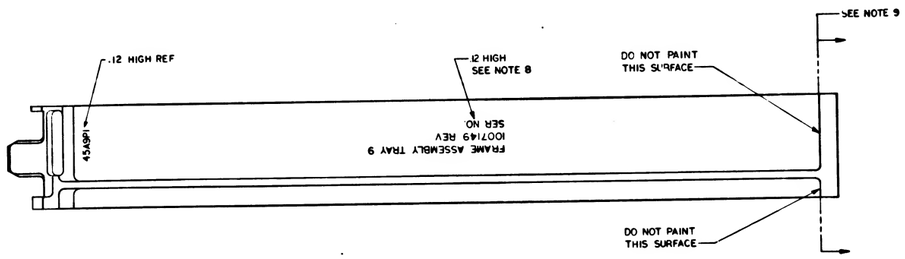
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
H	THIS SHEET ADDED PER TDRR 6466	7/16/68	
J	REVISED PER TDRR 11319	12-20-68	

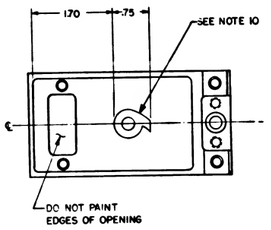


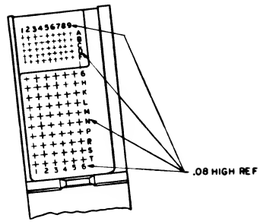
PARTIAL SECTION K-K

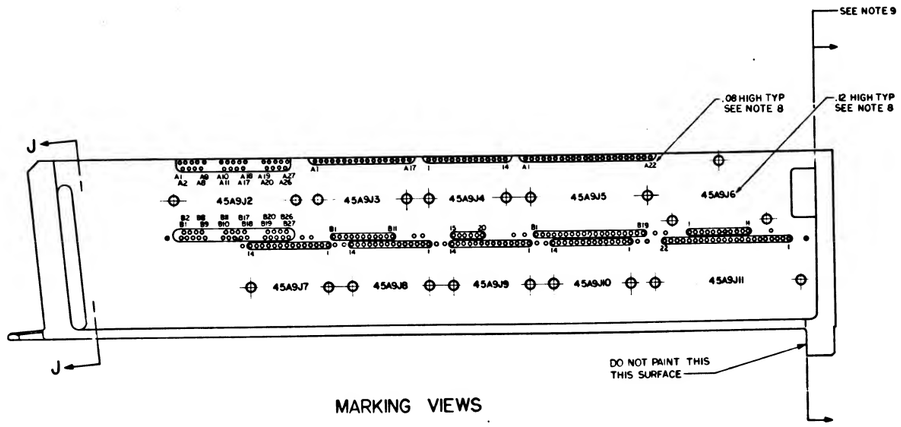


VIEW ROTATED 180°

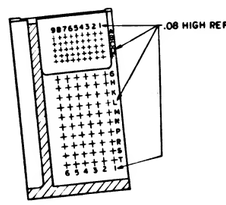








MARKING VIEWS



SECTION J-J

REV H THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS XX± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB Cambridge Mass
DRAWN [illegible] DATE 9 APR 68
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008109
SCALE 1/1 | WT | SHEET 3 OF 3

1008109 J

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 2141		
B	REVISED PER TDRR 2838		
C	REVISED PER TDRR 2731		
D	REVISED PER TDRR 2982		
E	REVISED PER TDRR 3246		
F	REVISED PER TDRR 3211		
G	REVISED PER TDRR 03781		
H	REVISED PER TDRR		
J	REVISED PER TDRR 11319		
K	REVISED PER TDRR 2596		

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE [-D-]
STEP BELOW SURFACE NOT PERMITTED

CUTOUT THRU

.140 DIA
.250 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE
GAGE POINT
CUTTER RADIUS
.094 R MAX PERMISSIBLE
.125 MAX.
.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE [-F-]
.040 BLEND WITH .12 R

VIEW A
SCALE 2/1

SECTION H-H
SCALE 2/1

.072 DIA 45 PLACES
8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE
9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE
5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
.040 x 45° ±5° 2 PLACES BLEND WITH .12 R
4-40 UNC-3B SEE NOTE 6
.137 .139 DIA 60 PLACES

SECTION F-F

BREAK EDGE THIS SIDE .03
SEE VIEW A
.487 .491 (FROM GAGE POINT)
.005 R MAX PERMISSIBLE
.16 R 2 PLACES
.12 3 PLACES

.030 R MAX PERMISSIBLE ONE PLACE ONLY
CUTOUT THRU
BREAK 2 EDGES THIS SIDE .03
.125 DIA x .19 DEEP 2 PLACES FOR MACHINING LOCATION
.062 x 45° TYP
.595 .575 DIMENSION FOR STEP ONLY
.030 R

.008 MAX ALLOWABLE STEP ABOVE SURFACE [-E-]
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

PARTIAL SECTION G-G
SCALE : 2:1

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.1 & FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN

.186 DIA .190 CSK 100° x .230 .210
.28 .226
5° 0' ±0° 15'

SECTION A-A
2 PLACES

.248
(2)
.165 DIA THRU .169
10-32UNF-2B THRU
82° ±1° CSK, .199 .189 DIA
.005 DIA
SEE NOTES 6 & 7
5°

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP
.281
.250 .246
5°
.245
.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

1007149	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH: SEE NOTE 6

M I T INSTRUMENTATION LAB Cambridge Mass.
DRAWN B. Shapiro DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

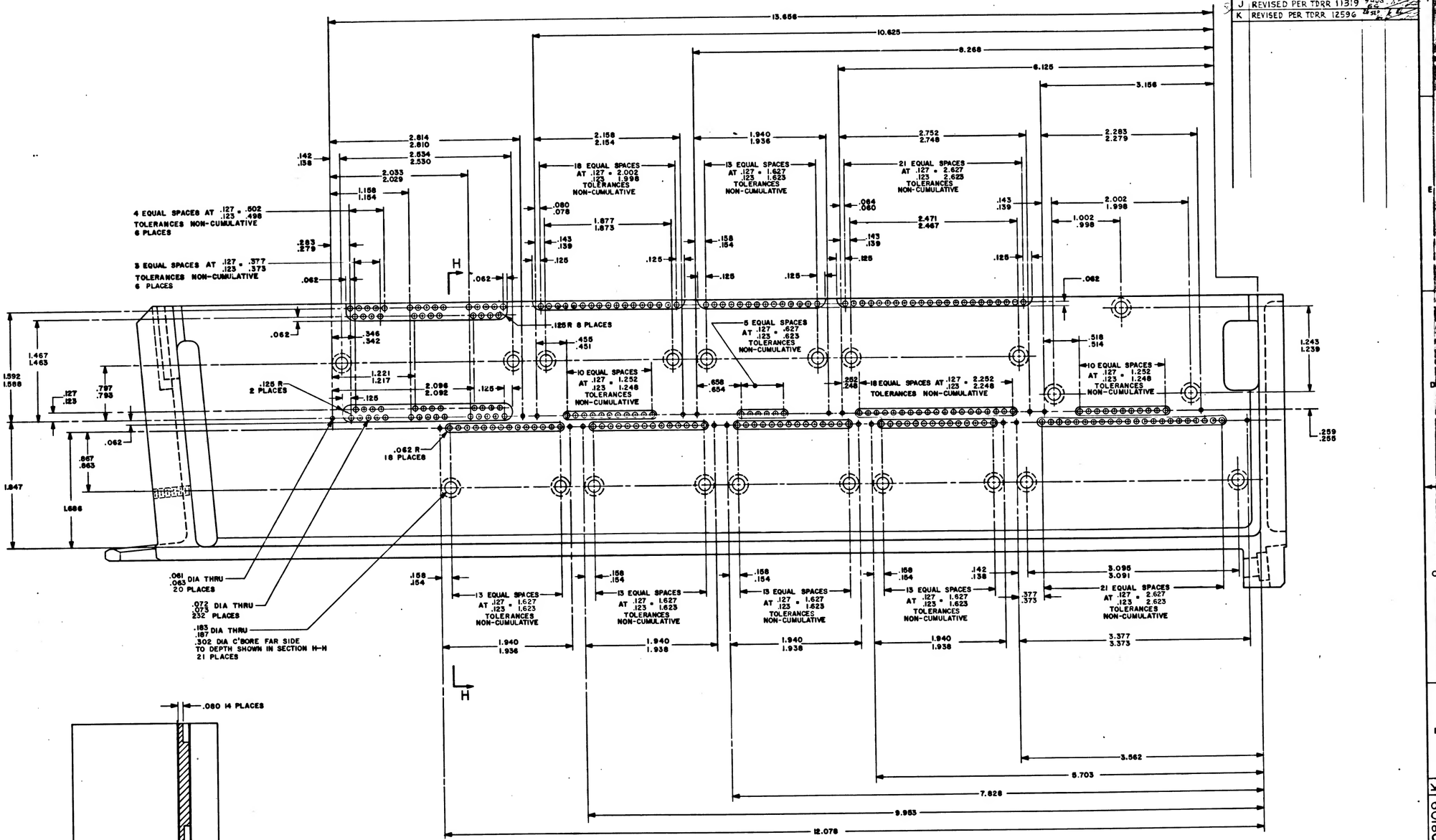
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME, TRAY 9

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008109
SCALE 1/1 | WT | SHEET 1 OF 3

1008109 K

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED	6/30	
C	REVISED PER TDRR 12731	8/63	
D	REVISED PER TDRR	9-6-63	
E	REVISED PER TDRR	1963	
F	REVISED PER TDRR	1963	
G	REVISED PER TDRR 03781	1965	
H	REVISED PER TDRR		
J	REVISED PER TDRR 11319	1968	
K	REVISED PER TDRR 12596	1969	



REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ± .02 .XXX ± .005 ANGLES 0°30'
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN E. Khoss DATE 6/30/63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

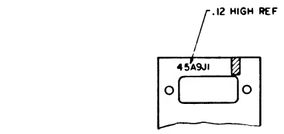
MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME, TRAY 9

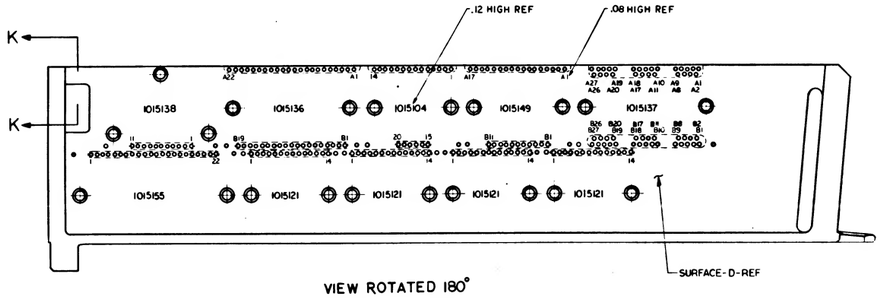
CODE IDENT NO | SIZE E | NASA DRAWING NO 1008109
SCALE 2:1 | WT | SHEET 2 OF 3

MT 6018001

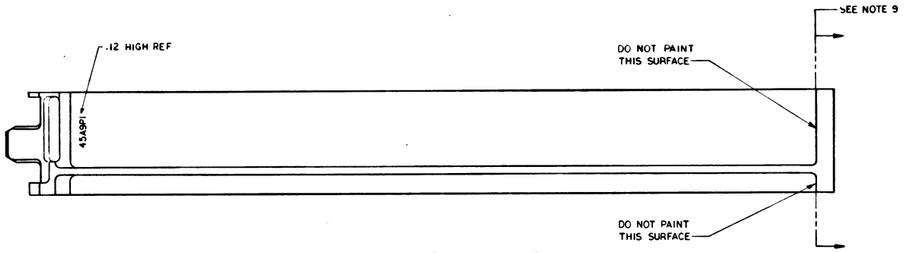
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
H	THIS SHEET ADDED PER TDRR 96466		
J	REVISED PER TDRR 11319		
K	REVISED PER TDRR 12596		

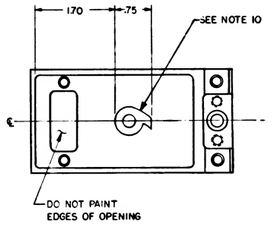


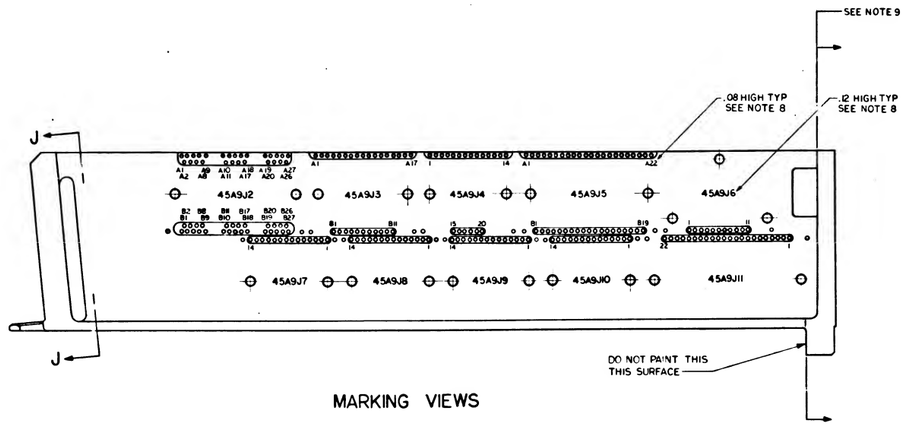
PARTIAL SECTION K-K

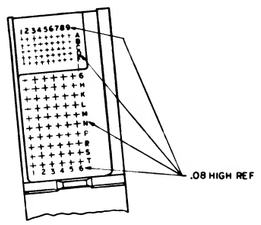


VIEW ROTATED 180°

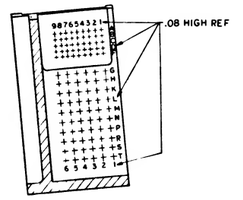








MARKING VIEWS



SECTION J-J

REV H THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING No.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ± .02 DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINAL FINISH —

NEXT ASSY | USED ON | APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE MASS.

DRAWN [illegible] DATE 4 DEC 63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME, TRAY 9

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008109

SCALE 1/1 | WT | SHEET 3 OF 3

REVISIONS TDRR 01827			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 12141		
B	REVISED PER TDRR 12880		
C	REVISED PER TDRR 12731		
D	REVISED PER TDRR 12982		
E	REVISED PER TDRR 13296		
F	REVISED PER TDRR 12111		
G	REVISED PER TDRR 03781		
H	REVISED PER TDRR		
J	REVISED PER TDRR 11319		
K	REVISED PER TDRR 12596		
L	REVISED PER TDRR 18692		

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D- STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE

GAGE POINT .729

VIEW A
SCALE 2/1

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

SECTION H-H
SCALE 2/1

.072 .073 DIA 45 PLACES

8 EQUAL SPACES AT .125 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ± .002 PITCH TOTAL .500 ± .002 TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.800 ± .002 TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE

4-40 UNC-3B SEE NOTE 6

BREAK EDGE THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

BREAK 2 EDGES THIS SIDE .03

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E- STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

SECTION F-F

PARTIAL SECTION G-G
SCALE 2:1

SECTION E-E

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINSH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO 1 & FIND NO 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002. EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN
11. AFTER PLATING, ROUGHENING OF THE SURFACES TO BE ENCAPSULATED IS PERMITTED. PLATING SURFACE MUST BE CONTINUOUS.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008109-1	FRAME, TRAY	1

LIST OF MATERIALS

1007149	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
XX ±.02
XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge Mass.
DRAWN DATE
CHECKED
APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO. 1008109

SCALE 1/1 | WT | SHEET 1 OF 3

NOTICE - THIS DOCUMENT CONTAINS INFORMATION OF A PROPRIETARY NATURE AND SHALL NOT BE DISCLOSED OUTSIDE THE GOVERNMENT OR DUPLICATED, USED OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS PROPOSAL. IF A CONTRACT IS AWARDED TO THIS OFFEROR AS A RESULT OF OR IN CONNECTION WITH THE SUBMISSION OF THIS DATA, THE GOVERNMENT SHALL HAVE THE RIGHT TO DUPLICATE, USE OR DISCLOSE THE DATA TO THE EXTENT PROVIDED IN THE CONTRACT. THIS RESTRICTION DOES NOT LIMIT THE GOVERNMENT'S RIGHT TO USE INFORMATION CONTAINED IN THIS DATA IF IT IS OBTAINED FROM ANOTHER SOURCE WITHOUT LIMITATION.

SYM	DESCRIPTION	DATE	APPROVAL
B	THIS SHEET ADDED 24230		
C	REVISED PER TDRR 02737		
D	REVISED PER TDRR		
E	REVISED PER TDRR		
F	REVISED PER TDRR 03207		
G	REVISED PER TDRR 03781		
H	REVISED PER TDRR		
J	REVISED PER TDRR 11319		
K	REVISED PER TDRR 12596		
L	REVISED PER TDRR 18092		

13.656
10.625
8.266
6.125
3.156

2.814 / 2.810
2.534 / 2.530
2.033 / 2.029
1.158 / 1.154
.142 / .138
4 EQUAL SPACES AT .127 = .502 .123 .498 TOLERANCES NON-CUMULATIVE 6 PLACES
.283 / .279
3 EQUAL SPACES AT .127 = .377 .123 .373 TOLERANCES NON-CUMULATIVE 8 PLACES
.062

2.158 / 2.154
18 EQUAL SPACES AT .127 = 2.002 .123 1.998 TOLERANCES NON-CUMULATIVE
.080 / .076
1.877 / 1.873
.143 / .139
.125

1.940 / 1.936
13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE
.158 / .154
.125

2.752 / 2.748
21 EQUAL SPACES AT .127 = 2.627 .123 2.623 TOLERANCES NON-CUMULATIVE
.084 / .080
2.471 / 2.467
.143 / .139
.125

2.283 / 2.279
.143 / .139
2.002 / 1.998
1.002 / .998
.062

.062
.346 / .342
.125R 8 PLACES
.455 / .451
5 EQUAL SPACES AT .127 = .627 .123 .623 TOLERANCES NON-CUMULATIVE
.518 / .514
10 EQUAL SPACES AT .127 = 1.252 .123 1.248 TOLERANCES NON-CUMULATIVE
.658 / .654
.252 / .248
18 EQUAL SPACES AT .127 = 2.252 .123 2.248 TOLERANCES NON-CUMULATIVE
10 EQUAL SPACES AT .127 = 1.252 .123 1.248 TOLERANCES NON-CUMULATIVE

1.467 / 1.463
1.592 / 1.588
.127 / .123
.797 / .793
.125R 2 PLACES
1.221 / 1.217
2.096 / 2.092
.125
1.243 / 1.239
.259 / .255
.062
.867 / .863
.062R 16 PLACES
1.847
1.686

.061 / .063 DIA THRU 20 PLACES
.072 / .075 DIA THRU 232 PLACES
.183 / .187 DIA THRU .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 21 PLACES

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936
.142 / .138
.377 / .373
3.095 / 3.091
21 EQUAL SPACES AT .127 = 2.627 .123 2.623 TOLERANCES NON-CUMULATIVE
3.377 / 3.373

3.582
5.703
7.828
9.953
12.078

H

.080 14 PLACES
.074 / .066
SECTION H-H

VIEW B-B
SCALE: 2:1

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX± .02 .XXX± .005 ANGLES ±0°30' DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
Final Finish —
NEXT ASSY | USED ON | APPLICATION

M I T INSTRUMENTATION LAB Cambridge Mass.
DRAWN E. Krauss DATE 8/8/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

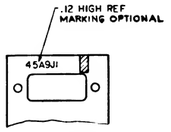
MANNED SPACECRAFT CENTE HOUSTON, TEXAS

FRAME, TRAY 9

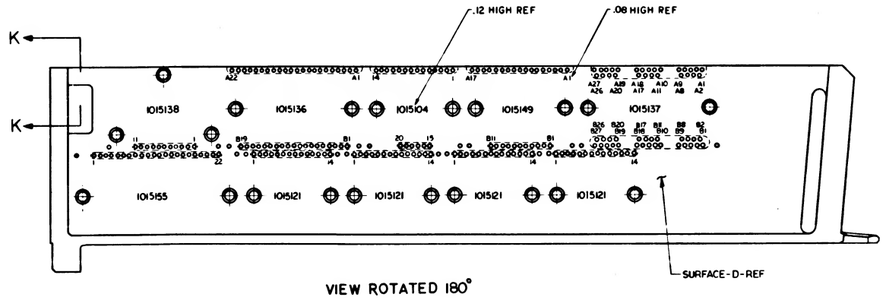
CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1008109
SCALE 2:1 | WT | SHEET 2 OF 3

1160180011

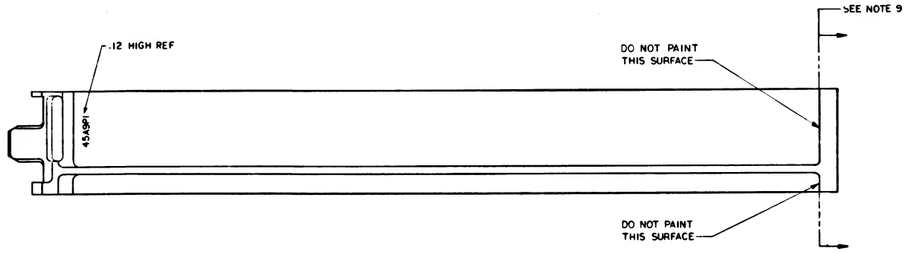
SYM	DESCRIPTION	DATE	APPROVAL
H	THIS SHEET ADDED PER TDRR		
J	REVISED PER TDRR 11		
K	REVISED PER TDRR 12		
L	REVISED PER TDRR 18		

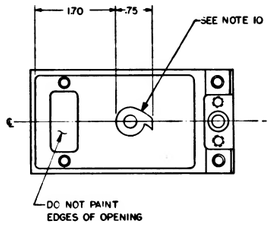


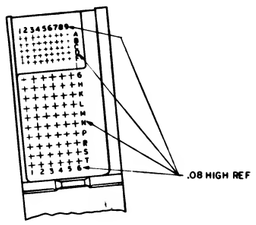
PARTIAL SECTION K-K

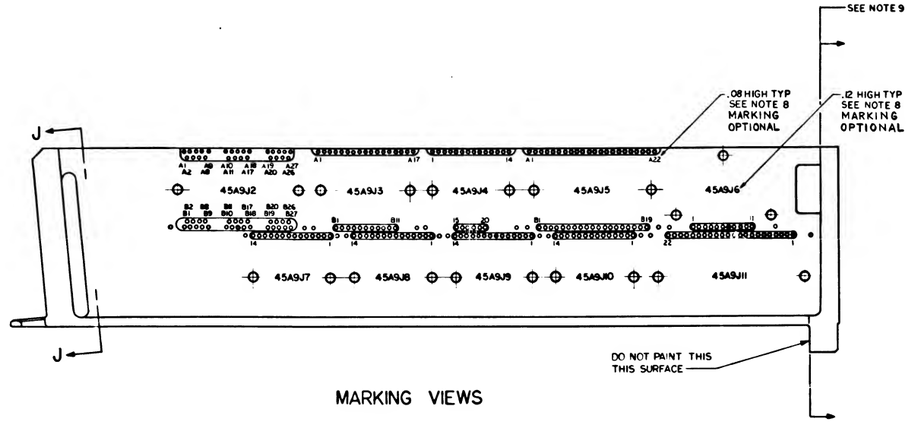


VIEW ROTATED 180°

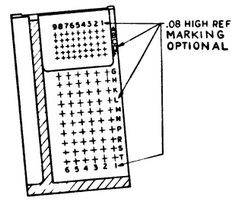








MARKING VIEWS



SECTION J-J

REV H THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN DATE 14 DEC 65
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME, TRAY 9

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	E	1008109

SCALE 1/1 WT SHEET 3 OF 3

1008109

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDMR 1007 P3	7-24-68	

SECTION D-D

.015 R MAX PERMISSIBLE

GAGE POINT .729

.2192 .2187

5°0' ± 0°15'

30°

.040 .060 TYP

30°

.477

30°

.040 .060 BLEND WITH .12 R

.5 R

VIEW A
SCALE 2/1

.000 .030 R

.005 MAX ALLOWABLE STEP ABAVE SURFACE STEP BELOW SURFACE NYT PERMITTED

-D-

.12 R

.12 2 PLACES

.100

.697 .696

2.150 2.130

.748 .746

30° TYP

CUTTER RADIUS

.135 .115 TYP

.270 .260

.125 MAX

.0005 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREA.STEP MAY NOT EXTEND TO LEFT OF SURFACE -E-

.385 .365

.110 .090

.000 .015 R

1.570

32

.0005 IN/IN

.160

D

D

B

B

3.450

.710 .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA
.260 DIA SPOTFACE
.240
2 HOLES

5 EQUAL SPACES AT .200 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 .690

.094R

F

F

2.712

13 EQUAL SPACES AT .200 ± .002 PITCH
TOTAL 2.600 ±.002 TOLERANCE NON-CUMULATIVE

.32 BSC

.040 .060 X 45° ±5° 2 PLACES BLEND WITH .12 R

.574 BSC

.136 .140 DIA 84 HOLES

.004 DIA

-B-
LC.004

.447 .427

.330 .310

.25 TYP

45° TYP

CUTOUT THRU

3.010 2.090

.000 .030 R

J6 R 2 PLACES

-C-

32

.005

32

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.125

.062

.094

J2 3 PLACES

.005 MAX. ALLOWABLE STEP -E- ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED

.030 R MAX PERMISSIBLE ONE PLACE ONLY

CUTOUT THRU

.520 .500

.385 .365

1.000 1.020

.000 .015 R

G .050

.094

G

.610 .596

.062 X 45° TYP

.030 R

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATIONS

4.260 REF

3.700

.188

.570 .550

.595 .575 DIM FOR STEP ONLY.

C B A

E E

A

B

C

.406

.812

.562

1.135 1.125

.813 .811

1.625 1.623

1.070

2.150 2.130 REF

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS. LOCATE CENTRALLY

.430 .400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

.015 R MAX PERMISSIBLE

SECTION E-E

.186 .190 DIA CSK 100° X .330 .310

.2270 .2250

5°0' ±0°15'

SECTION A-A
2 PLACES

.248

2

.165 .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 .195 DIA

.005 DIA

SEE NOTES 6 & 8

SECTION B-B
2 PLACES

.272 DIA CBORE .406 DIA X .142 DEEP

.281

.250 .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002196 DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1& FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
9. MODULE MOUNTING SCREWS AND MODULE ELECTRICAL RECEPTACLES, THIS INFORMATION WILL BE ADDED TO DRAWING AS SOON AS IT IS AVAILABLE.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
XX ±.02
XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINAL FINISH
SEE NOTE 6
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB
Cambridge Mass
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 10

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008110
SCALE 1/1 | WT | SHEET 1 OF 2

1008110 1A

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
DTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR [illegible]	[illegible]	[illegible]
C	REVISED PER TDRR [illegible]	[illegible]	[illegible]

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED -D-

.005 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATIONS

.140 DIA .248 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

VIEW A
SCALE 2/1

5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

13 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 2.600 ±.002 TOLERANCE NON-CUMULATIVE

4-40 UNC-3B TAP AFTER ANODIZING

.136 .140 DIA 84 HOLES .004 DIA

SEE VIEW A

.005 MAX. ALLOWABLE STEP -E- ABOVE SURFACE, STEP BELOW SURFACE NOT PERMITTED

.030 R

.062 X 45° TYP

.595 .575 DIM FOR STEP ONLY.

SECTION F-F

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS. LOCATE CENTRALLY

SECTION E-E

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

.729 REF — 16.7195 16.7165 (FROM CAGE POINT) — 17.488 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002186 DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO. 1a. FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
9. MODULE MOUNTING SCREWS AND MODULE ELECTRICAL RECEPTACLES. THIS INFORMATION WILL BE ADDED TO DRAWING AS SOON AS IT IS AVAILABLE.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
5 XX ±.02 XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINISH SEE NOTE 6
NEXT ASSY USED ON APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DSN BY
DRAWN
CHECKED
APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 10

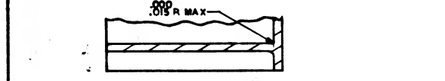
NASA APPROVAL
MIT APPROVAL
CODE IDENT NO. SIZE E NASA DRAWING NO 1008110
SCALE 1/1 WT SHEET 1 OF 2

MASTER

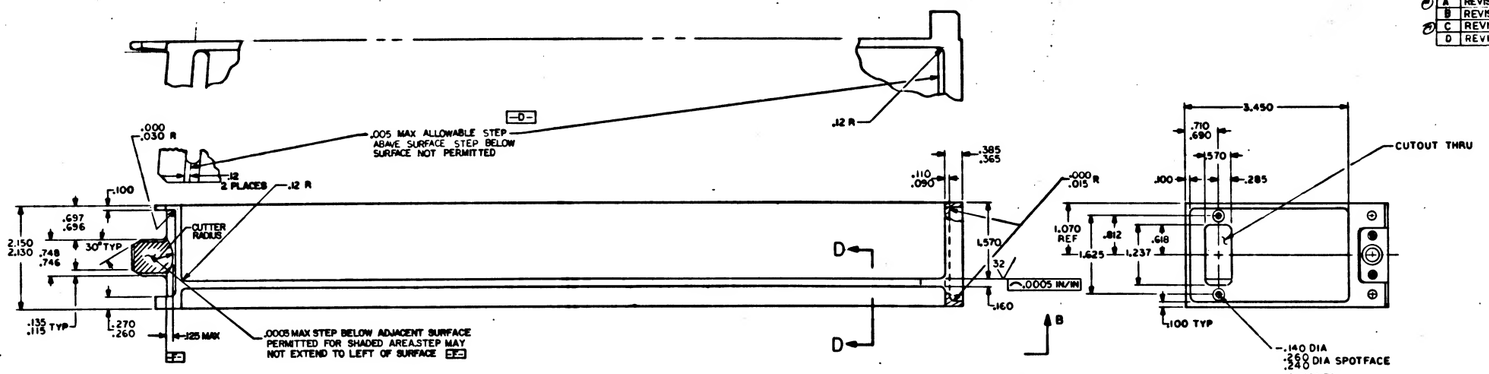
INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

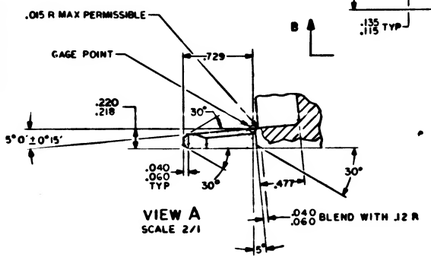
1008110 C

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 03278	7-12-68	[illegible]
B	REVISED PER TDRR 03343	9-19-68	[illegible]
C	REVISED PER TDRR 03377	11-8-68	[illegible]
D	REVISED PER TDRR 03775	4-4-69	[illegible]

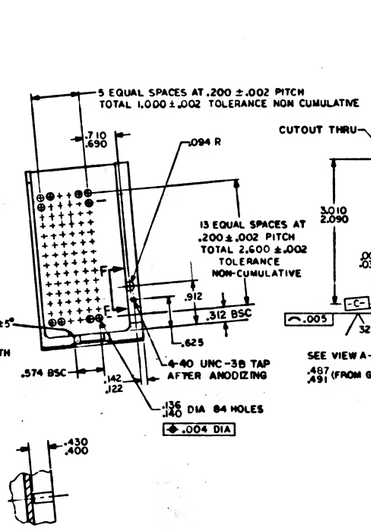


SECTION D-D

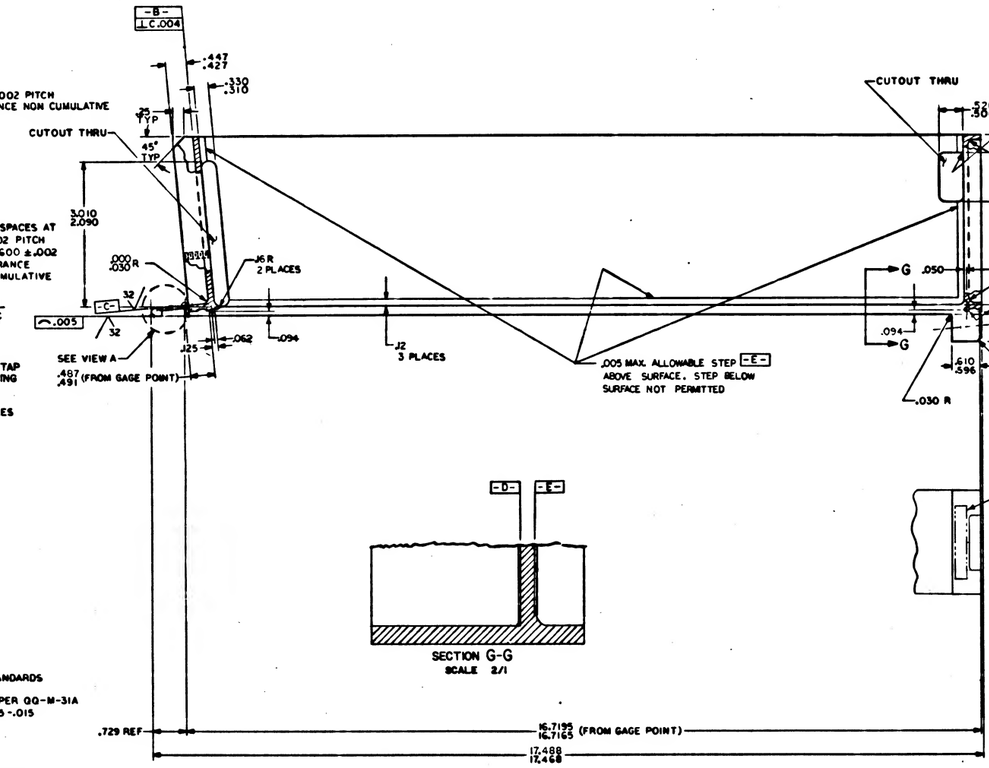


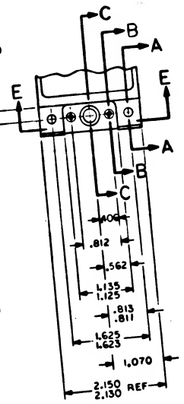


VIEW A
SCALE 2/1



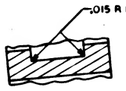
SECTION F-F





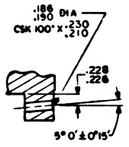
SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS. LOCATE CENTRALLY

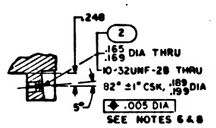


SECTION E-E

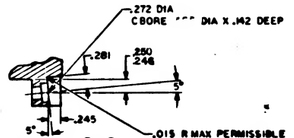
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER MDI002188 DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO. 1a. FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
9. MODULE MOUNTING SCREWS AND MODULE ELECTRICAL RECEPTACLES. THIS INFORMATION WILL BE ADDED TO DRAWING AS SOON AS IT IS AVAILABLE.



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
X ±.02
XX ±.010
XXX ±.005
0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT: —
FINISH: SEE NOTE 6
NEXT ASSY
USED ON
APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
CONTRACT NO.
DRAWN B. [illegible] DATE
CHECKED
APPROVED
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 10

CODE IDENT NO | SIZE | NASA DRAWING NO
E | 1008110

SCALE 1/1 | WT | SHEET 1 OF 2

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

1008110 D

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
D	THIS SHEET ADDED PER TORR 9375		

2 SPACES AT .127 .123 PITCH TOTAL .252 .248
TOLERANCES NON-CUMULATIVE
2 PLACES

.072 .073 DIA THRU
98 PLACES

16.177

2.564
2.560

1.498
1.502

.061 .063 DIA THRU
10 PLACES

.406
.404

H

.062

.868
.862

1.868
1.862

2.280

.143
.138

R
10 PLACES

6 SPACES AT .127 .123 PITCH TOTAL .752 .746
TOLERANCES NON CUMULATIVE
6 PLACES

1.002
.998

.152
.148

.493
.507

.062
.125

3.436

.259
.255

1.743
1.757

1.885

1.241

.797

.243
.257

.868
.862

.127
.123

.910

1.410

1.581
1.587

.092
.088

.074
.070

.152
.148

H

.187 MIN
CUTTER R
6 PLACES

.062 R
14 PLACES

.183 DIA THRU
.187
C'BORE .302 DIA FAR SIDE
TO DEPTH SHOWN IN SECTION H-H
16 PLACES

1.002
.998

2.313

.074
.070

2.052
2.048

3.752
3.748

4.406

4.546

4.548
4.552

7.214

9.873

15.040

6 SPACES AT .127 .123 PITCH TOTAL .627 .623
TOLERANCES NON-CUMULATIVE

3 SPACES AT .127 .123 PITCH TOTAL .377 .373
TOLERANCE NON-CUMULATIVE

6 SPACES AT .127 .123 PITCH TOTAL .752 .746
TOLERANCES NON-CUMULATIVE
3 PLACES

3 SPACES AT .127 .123 PITCH TOTAL .377 .373
TOLERANCES NON CUMULATIVE

.080 TYP

.074
.066 TYP

SECTION H-H

VIEW B-B
SCALE: 2:1

REV D THIS SHEET ADDED

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN DATE 10-4-63
CHECKED DATE 10-4-63
APPROVAL DATE 10-5-63
APPROVAL
NASA APPROVAL 10-7-63
MIT APPROVAL 10-8-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 10

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008110
SCALE 2/1 | WT | SHEET 2 OF 2

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

ZONE	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03228	1-7-69	RPK
B	REVISED PER TDRR 03255	1-15-69	RPK
C	REVISED PER TDRR 03259	1-24-69	RPK
D	REVISED PER TDRR 03275	2-4-69	RPK
E	REVISED PER TDRR 03291	2-13-69	RPK

SECTION D-D

.000
.015 R MAX

.000
.030 R

.005 MAX ALLOWABLE STEP ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED -D-

.12 R

.12
2 PLACES

.12 R

.100

.697
.696

.748
.746

2.150
2.130

30° TYP

CUTTER RADIUS

.135
.115 TYP

.270
.260

.125 MAX

.0005 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -E-

.385
.365

.110
.090

.570

32

.0005 IN/IN

.160

.000
.015 R

3.450

.710
.690

.570

.100

.285

CUTOUT THRU

1.070
REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA
.260
.240 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220
.218

30°

5°0'±0°15'

.040
.060
TYP

30°

.477

30°

VIEW A
SCALE 2/1

.040
.060 BLEND WITH .12 R

5°

-B-
⊥C.004

.447
.427

.330
.310

CUTOUT THRU

45°
TYP

45°
TYP

5 EQUAL SPACES AT .200 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710
.690

.094 R

13 EQUAL SPACES AT
.200 ± .002 PITCH
TOTAL 2.600 ±.002
TOLERANCE
NON-CUMULATIVE

3.010
2.990

.000
.030 R

.12 R
2 PLACES

.005

32

-C-

SEE VIEW A

.487
.491 (FROM GAGE POINT)

.912

.312 BSC

.625

.574 BSC

.155
.145

4-40 UNC-3B TAP
AFTER ANODIZING

.137
.139 DIA 84 HOLES
.004 DIA

.040
.060 x 45°±5°
2 PLACES
BLEND WITH
.12 R

.425

.062

.094

J2
3 PLACES

.005 MAX. ALLOWABLE STEP -E-
ABOVE SURFACE. STEP BELOW
SURFACE NOT PERMITTED

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

.520
.500

.385
.365

1.000
1.020

.000
.015 R

4.260
REF

3.700

.125 DIA X .19 DEEP
2 PLACES FOR
MACHINING LOCATIONS

G .050

.094

G

.610
.596

.062 x 45° TYP

.030 R

.188

.570
.550

.595
.575 DIM
FOR
STEP ONLY.

C
B
A
E
E
A
B
C

.406

.812

.562

L.135
1.125

.813
.811

L.625
L.623

1.070

2.150
2.130 REF

.430
.400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS, PER ND 1002019 LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.7195
16.7165 (FROM GAGE POINT)

17.488
17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002188 DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUS THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
9. MODULE MOUNTING SCREWS AND MODULE ELECTRICAL RECEPTACLES. THIS INFORMATION WILL BE ADDED TO DRAWING AS SOON AS IT IS AVAILABLE.

.186 DIA
.190 CSK 100° x .230
.210

.228
.226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165
.169 DIA THRU
10-32 UNF-2B THRU

82° ±1° CSK, .189
.193 DIA

.005 DIA
SEE NOTES 6 & 8

SECTION B-B
2 PLACES

.272 DIA
°CBORE .406 DIA x .142 DEEP

.281

.280
.246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± XX ±.02 ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINISH SEE NOTE 8
NEXT ASSY USED ON
APPLICATION

MIT INSTRUMENTATION LAB
DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

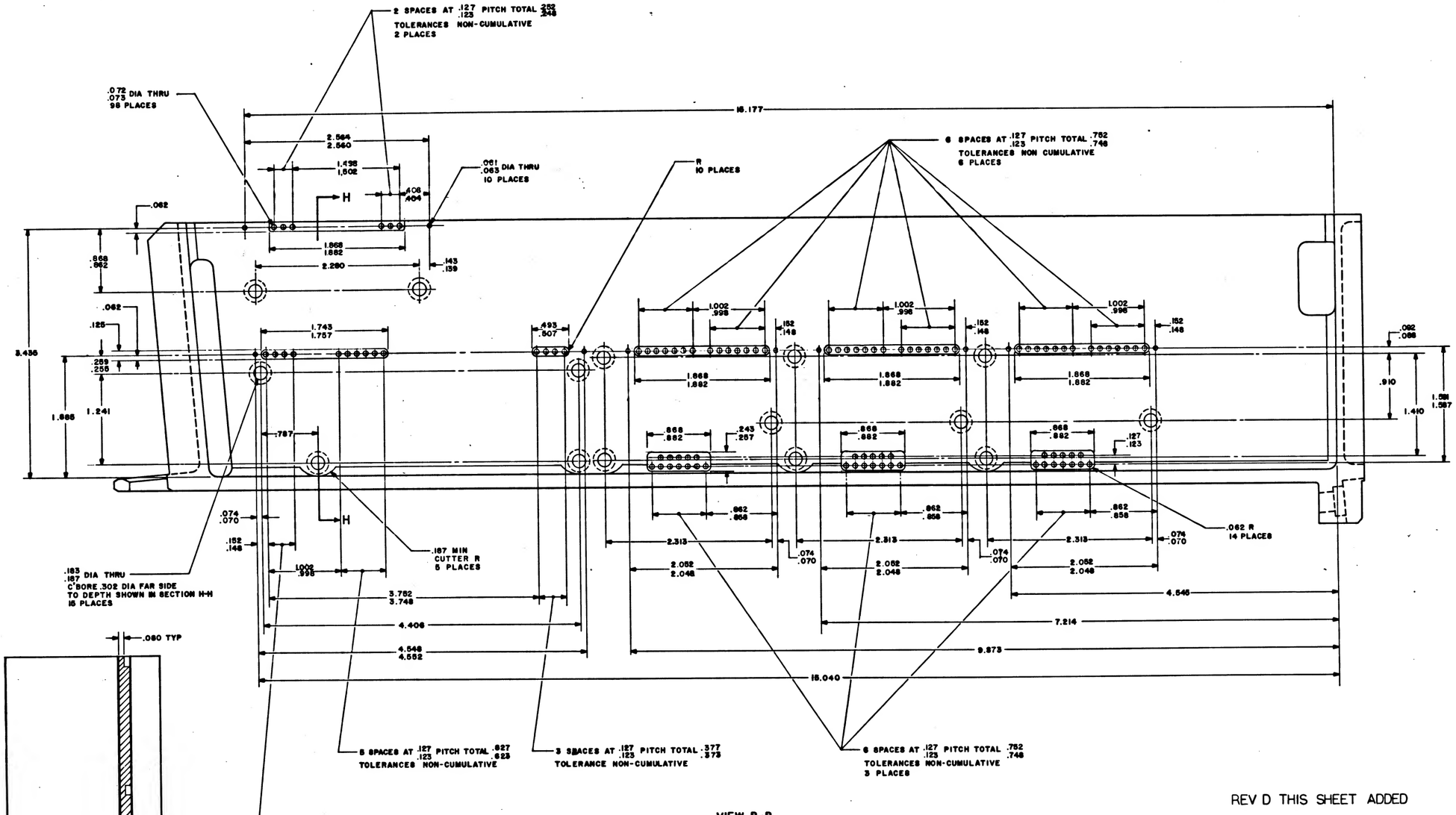
FRAME,
TRAY 10

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008110
SCALE 1/1 | WT | SHEET 1 OF 2

1008110 E

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
D	THIS SHEET ADDED PER TDRR 93175		
E	REVISED PER TDRR 03771		



VIEW B-B
SCALE: 2:1

SECTION H-H

REV D THIS SHEET ADDED

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
Cambridge, Mass.
DRAWN [illegible] DATE 10-10-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible] 10-15-63
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 10

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008110
SCALE 2/1 | WT | SHEET 2 OF 2

1008110 E

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
ZONE	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02725	7-2-68	
B	REVISED PER TDRR 03245	9-19-68	
C	REVISED PER TDRR 03-77	7-1968	
D	REVISED PER TDRR 03775	9-4-68	
E	REVISED PER TDRR 03871	10-24-68	
F	REVISED PER TDRR 04-39	12-4-68	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE STEP BELOW SURFACE NOT PERMITTED -D-

.000 .030 R

.12 2 PLACES

.12 R

.100

.697 .696

2.150 2.130

.748 .746

30° TYP

CUTTER RADIUS

.135 .115 TYP

.270 .260

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREA.STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.395 .365

.110 .090

.000 .015 R

1.570

.32

.0005 IN/IN

.160

3.450

.710 .690

1.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA .260 .240 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

5° 0' ±0°15'

.040 .060 TYP

30°

.477

30°

.040 .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.005 MAX ALLOWABLE STEP ABOVE -B- STEP BELOW SURFACE NOT PERMITTED BLEND .12 R WITH .000.030 R

5 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON CUMULATIVE

.710 .690

.094 R

13 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 2.600 ± .002 TOLERANCE NON-CUMULATIVE

.912

.625

.314 .310

.040 .060 x 45°±5° 2 PLACES BLEND WITH .12 R

.878 .872

.155 .145

6-40 UNC-3B SEE NOTE 6

.137 .139 DIA 84 HOLES

-B- LC.004

.447 .427

.330 .310

.25 TYP

45° TYP

CUTOUT THRU

BREAK EDGE THIS SIDE .05

3.010 2.990

.000 .030 R

-C-

.005 32

32

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.16 R 2 PLACES

.125

.062

.094

.12 3 PLACES

.005 MAX ALLOWABLE STEP -E- ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED

BREAK 2 EDGES THIS SIDE .03

CUTOUT THRU

.520 .500

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.395 .365

1.000 1.020

.000 .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATIONS

G .050

.094

G

.610 .596

.030 R

.062 x 45° TYP

.188

.570 .550

.593 .575 DIM FOR STEP ONLY.

C B A E E A B C

.406

.812

.562

1.135 1.125

.813 .811

1.625 1.623

1.070

2.150 2.130 REF

.430 .400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS. PER ND 1002019 LOCATE CENTRALLY

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002310 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 AND FIND NO 2 WITH MIL P 8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002018. ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN.
9. PAINT PER ND USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND USING 1010729-3. CHARACTERS TO BE TYPE 1 CLASS 1 PER ND 1002182. CENTRALIZE AS SHOWN.

.186 .190 DIA CSK 100° x .230 .210

5° 0' ±0°15'

SECTION A-A
2 PLACES

.246

2

.165 .165 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .199 .189 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA X .142 DEEP

.281

.250 .246

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON FRACTIONS DECIMALS ANGLES	XX ±.02 XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
HEAT TREATMENT	
FINISH	SEE NOTE 6
1007100 NEXT ASSY	USED ON
APPLICATION	

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

DRAWN [illegible] DATE

CHECKED

APPROVED

APPROVED

NASA APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 10

WORK ORDER NO. | SIZE E | NASA DRAWING NO. 1008110

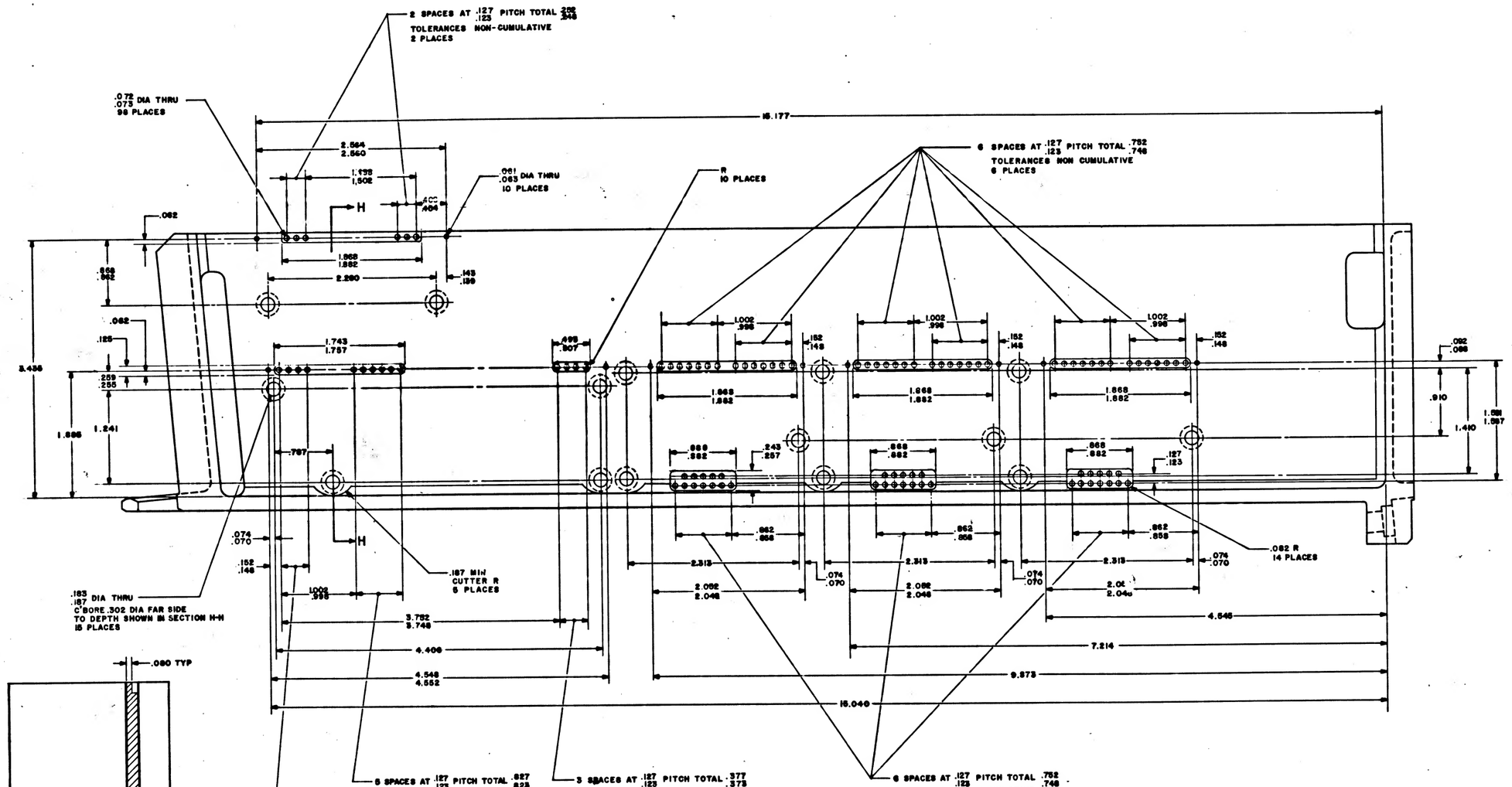
SCALE 1/1 | WT | SHEET 1 OF 5

1008110 F1

MASTER

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
D	THIS SHEET ADDED PER TDRR S-5775		WK
E	REVISED PER TDRR 20771	10/31/67	WK
F	REVISED PER TDRR 20491		WK



SECTION H-H

VIEW B-B
SCALE: 2:1

REV D THIS SHEET ADDED

MASTER

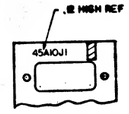
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINISH	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
	DRAWN [illegible] DATE 10-6-66 CHECKED [illegible] 10/31/67 APPROVAL [illegible] 10-6-66 APPROVAL NASA APPROVAL [illegible] 10-24-67 MIT APPROVAL [illegible]	FRAME, TRAY 10	
NEXT ASSY / APPLICATION	USED ON	CODE IDENT NO. SIZE E	NASA DRAWING NO. 1008110
		SCALE 2/1 WT	SHEET 2 OF 3

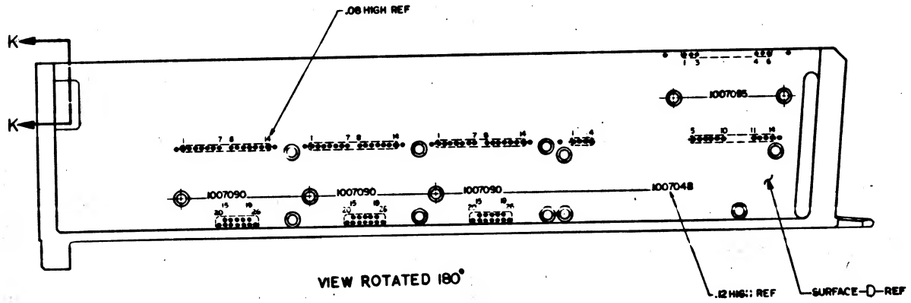
1008110 E

INCHES
PHOTOGRAPHIC SCALE ONLY

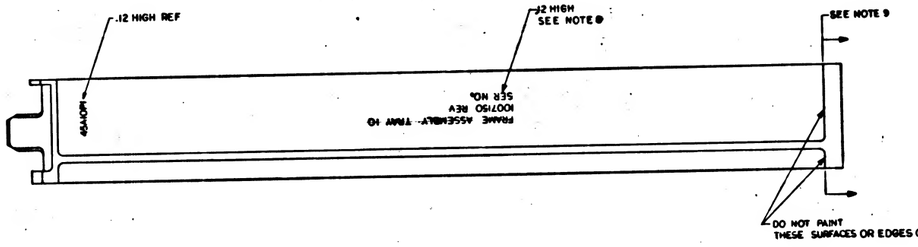
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
F	THIS SHEET ADDED PER TDRR 0659	11/6/67	WK

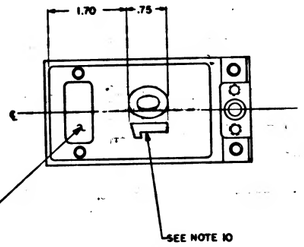


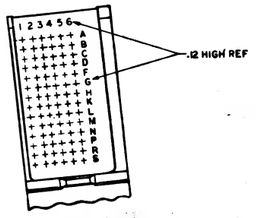
PARTIAL SECTION K-K

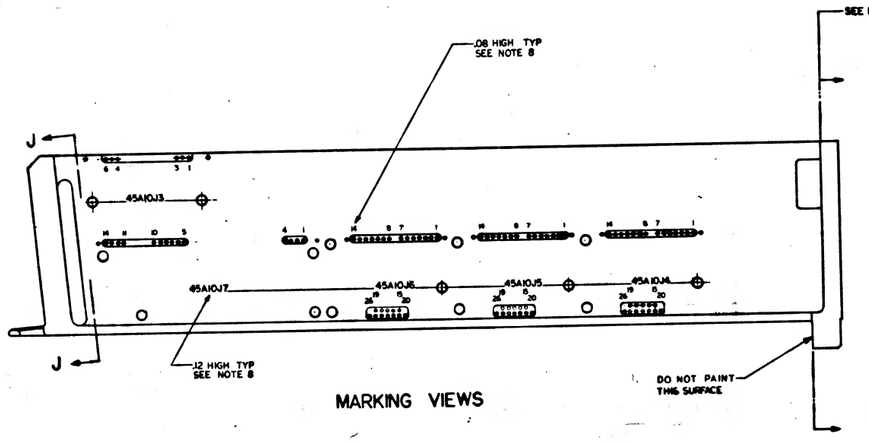


VIEW ROTATED 180°

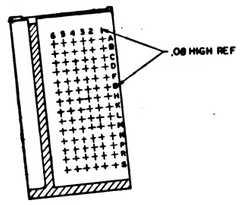








MARKING VIEWS



SECTION J-J

REV F THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON	APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± .XX DECIMALS ± .XX ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE DEC 11 67
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL —
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 10

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008110

SCALE 1/1 WT SHEET 3 OF 3

MASTER

1008110 LF

INCHES
PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR		
C	REVISED PER TDRR		
D	REVISED PER TDRR		
E	REVISED PER TDRR		
F	REVISED PER TDRR		
G	REVISED PER TDRR 11319		

SECTION D-D

.000 / .015 R MAX

.005 MAX ALLOWABLE STEP ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED -D-

.000 / .030 R

.12 2 PLACES

.12 R

.100

.697 / .696

2.150 / 2.130

.748 / .746

30° TYP

CUTTER RADIUS

.135 / .115 TYP

.270 / .260

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREASTEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.385 / .365

.110 / .090

.000 / .015 R

4.570

32

.0005 IN/IN

.160

3.450

.710 / .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

1.625

1.237

.618

.100 TYP

.140 DIA / .260 DIA SPOTFACE / .240 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

5°0'±0°15'

30°

.040 / .060 TYP

30°

.477

.040 / .060 BLEND WITH .12 R

VIEW A
SCALE 2/1

.005 MAX ALLOWABLE STEP ABOVE -B- STEP BELOW SURFACE NOT PERMITTED BLEND .12 R WITH .000/.030 R

5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 / .690

.094 R

13 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 2.600 ±.002 TOLERANCE NON-CUMULATIVE

.912

.040 / .060 x 45°±5° 2 PLACES BLEND WITH .12 R

.625

.314 / .310

.575 / .572

.155 / .145

4-40 UNC-3B SEE NOTE 6

.137 / .139 DIA 84 HOLES

-B- ⊥C.004

.447 / .427

.330 / .310

.25 TYP

45° TYP

CUTOUT THRU

BREAK EDGE THIS SIDE .03

3.010 / 2.990

.000 / .030 R

.16 R 2 PLACES

32

-C-

.005

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.125

.062

.094

.12 3 PLACES

.005 MAX. ALLOWABLE STEP -E- ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED

BREAK 2 EDGES THIS SIDE .03

.030 R MAX PERMISSIBLE ONE PLACE ONLY

CUTOUT THRU

.520 / .500

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 / 3.700 REF

125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATIONS

G .050

.094

G

.610 / .596

.030 R

.062 x 45° TYP

.188

.570 / .550

.595 / .575 DIM FOR STEP ONLY.

C B A E E A B C

.406

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

.430 / .400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTORS, PER ND 1002019 LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.1 AND FIND NO 2 WITH MIL P 8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS - 4PN.
9. PAINT PER ND 1002110 TYPE II, ... 3 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE END OF FRAME UNLESS O HERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I CLASS I PER ND 1002122. CENTRALIZE AS SHOWN.

.186 / .190 DIA C'SK 100° x .230 / .210

.228 / .226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 / .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 / .193 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA x .142 DEEP

.281

.250 / .246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

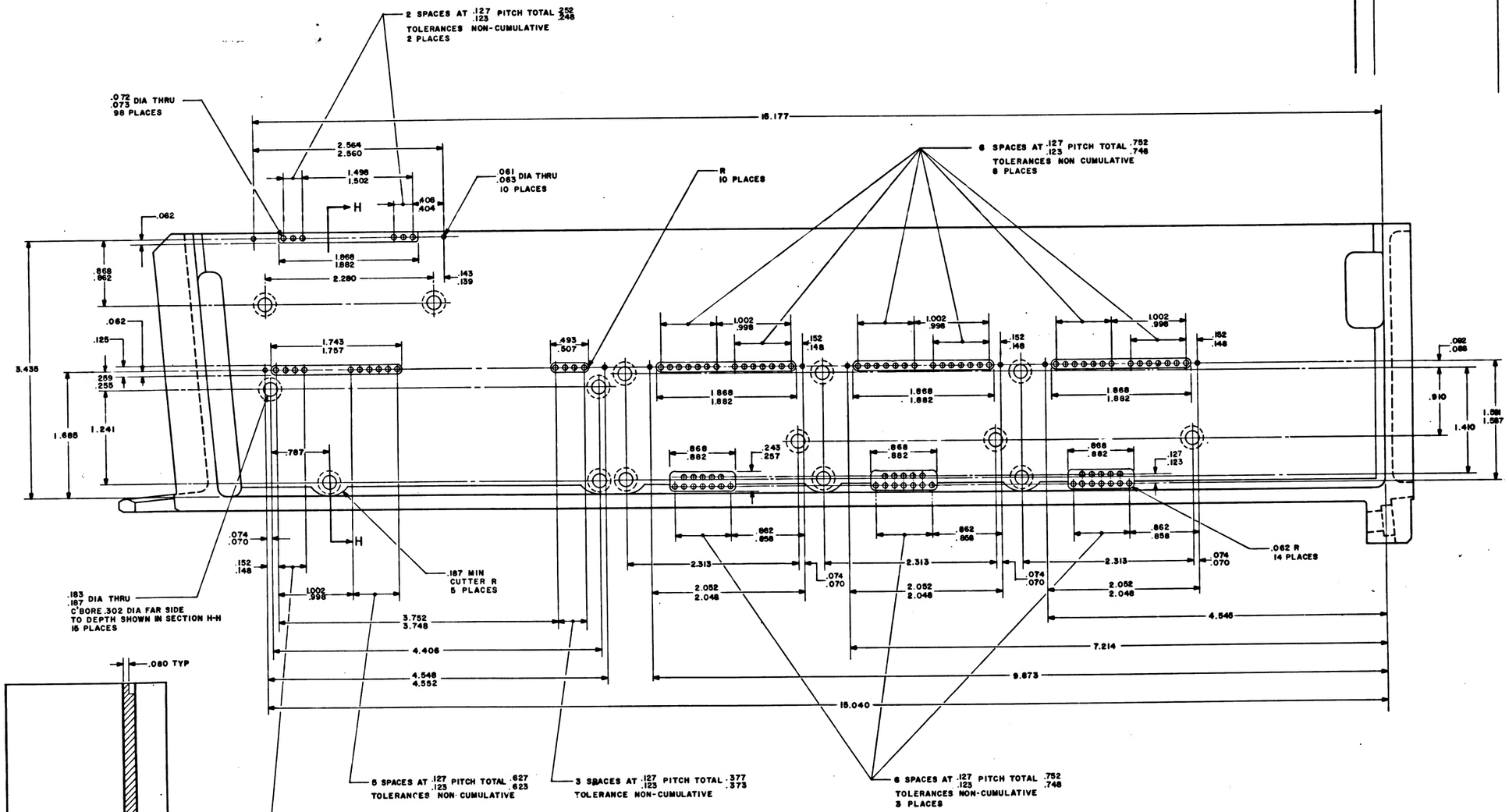
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

1007150		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES .XX ±.02 .XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass. DRAWN DATE CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
NEXT ASSY	USED ON	MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION		HEAT TREATMENT — FINAL FINISH SEE NOTE 6	FRAME, TRAY 10
			CODE IDENT NO E — NASA DRAWING NO 1008110
			SCALE 1/1 WT SHEET 1 OF 2

1008110 G

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
D	THIS SHEET ADDED PER TDRR S-2115		
E	REVISED PER TDRR 03711	11 AUG 63	
F	REVISED PER TDRR 3249		
G	REVISED PER TDRR 11319	19 AUG 63	



SECTION H-H

VIEW B-B
SCALE: 2:1

REV D THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS
DRAWN Bonanno DATE 10-10-63
CHECKED [illegible] 10-10-63
APPROVAL [illegible] 10-10-63
APPROVAL
NASA APPROVAL [illegible] 10-10-63
MIT APPROVAL [illegible]

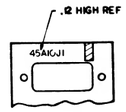
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 10

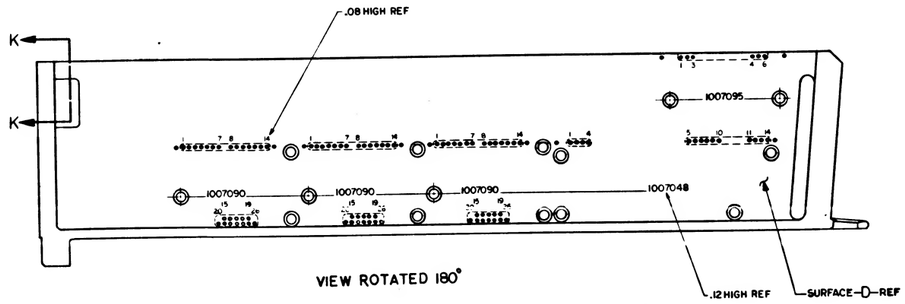
CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008110
SCALE 2/1 | WT | SHEET 2 OF 3

1008110 G

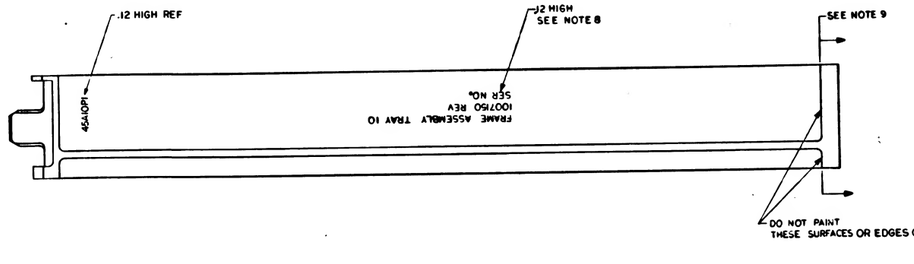
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
F	THIS SHEET ADDED PER TDRR 0-5791	2/4/70	
G	REVISED PER TDRR 11319	18 AUG 69	

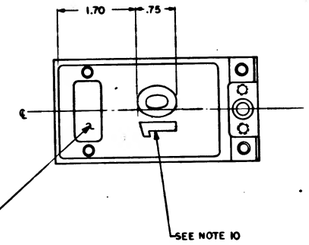


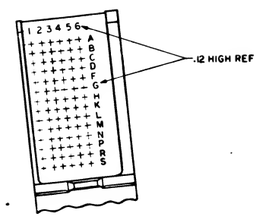
PARTIAL SECTION K-K

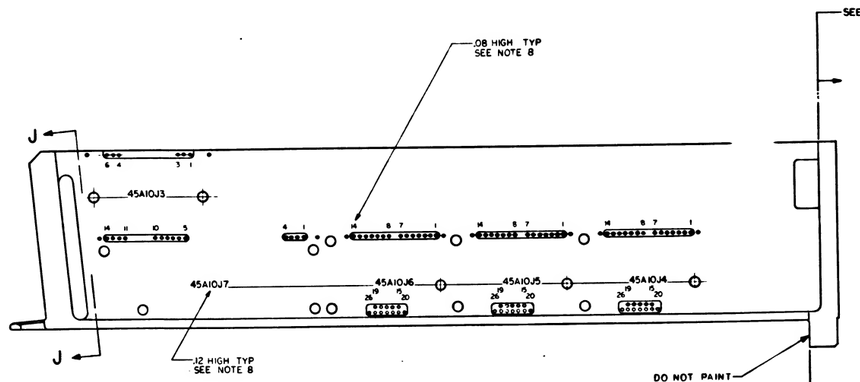


VIEW ROTATED 180°

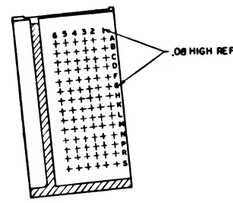








MARKING VIEWS



SECTION J-J

REV F THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		BILL OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINAL FINISH	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DRAWN DATE CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
NEXT ASSY	USED ON		
APPLICATION			

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 10

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008110
SCALE 1/1	WT	SHEET 3 OF 3

1008110 G

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR		
C	REVISED PER TDRR		
D	REVISED PER TDRR		
E	REVISED PER TDRR 03281		
F	REVISED PER TDRR		
G	REVISED PER TDRR 11319		
H	REVISED PER TDRR 12596		

SECTION D-D

SECTION F-F

VIEW A
SCALE 2/1

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

SECTION G-G
SCALE 2/1

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 AND FIND NO 2 WITH MIL P 8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I CLASS I PER ND 1002122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

1007150			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS .XX ±.02 .XXX ±.005 ANGLES ± 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

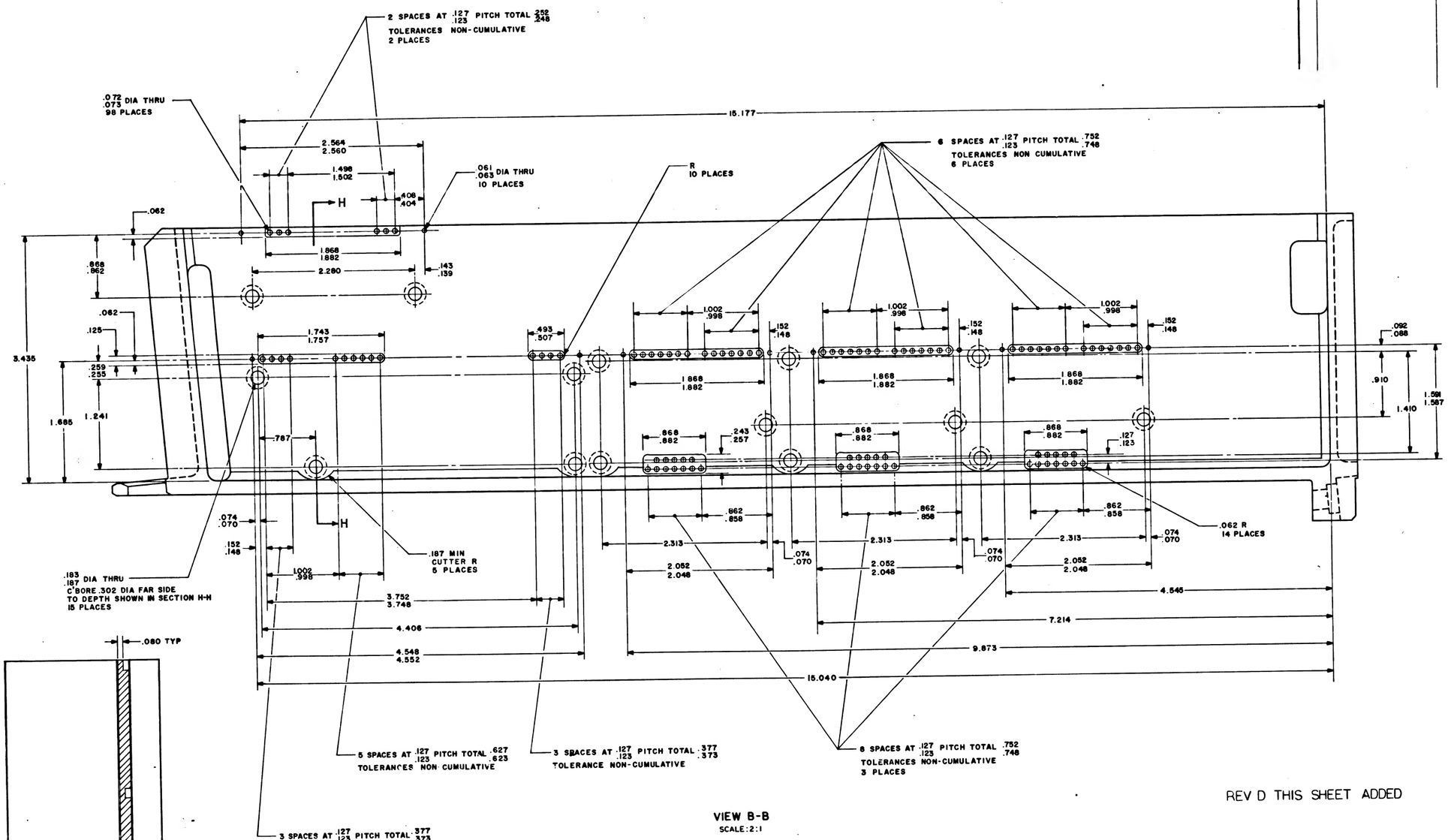
MIT INSTRUMENTATION LAB Cambridge Mass
DRAWN [illegible] DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME, TRAY 10

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008110
SCALE 1/1 | WT | SHEET 1 OF

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
D	THIS SHEET ADDED PER TDRR ~		
E	REVISED PER TDRR 03771		
F	REVISED PER TDRR ~		
G	REVISED PER TDRR 11319		
H	REVISED PER TDRR 12596		



SECTION H-H

VIEW B-B
SCALE: 2:1

REV D THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DRAWN Bonanno DATE 9/6/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible] 10-7-63
MIT APPROVAL [illegible]

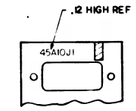
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 10

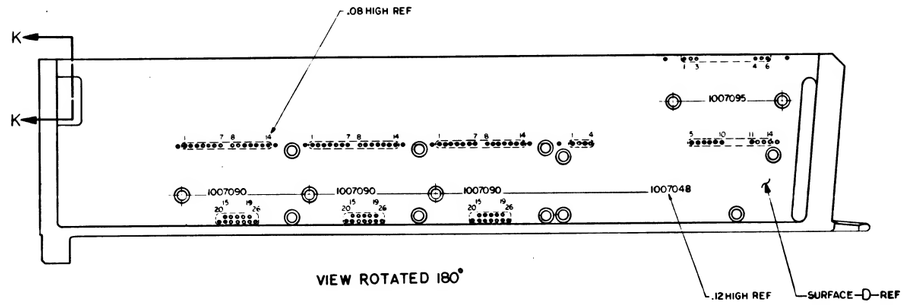
CODE IDENT NO | SIZE E | NASA DRAWING NO 1008110
SCALE 2/1 | WT | SHEET 2 OF 7

H 0180071

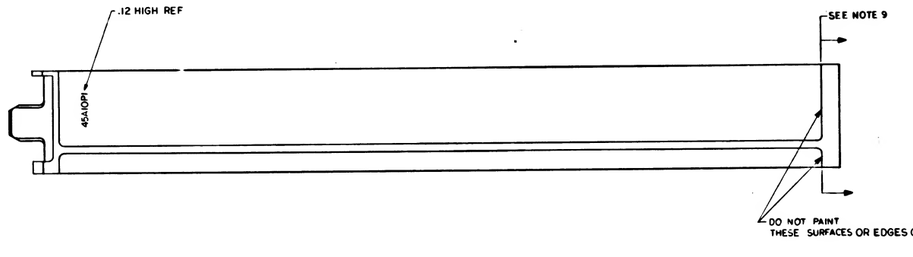
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
F	THIS SHEET ADDED PER TDRR		
G	REVISED PER TDRR 11319		
H	REVISED PER TDRR 12596		

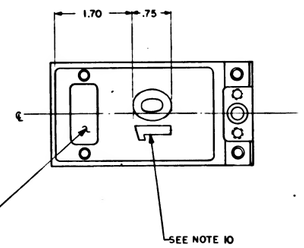


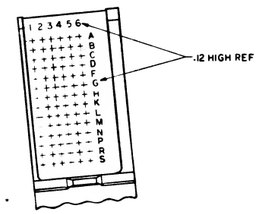
PARTIAL SECTION K-K

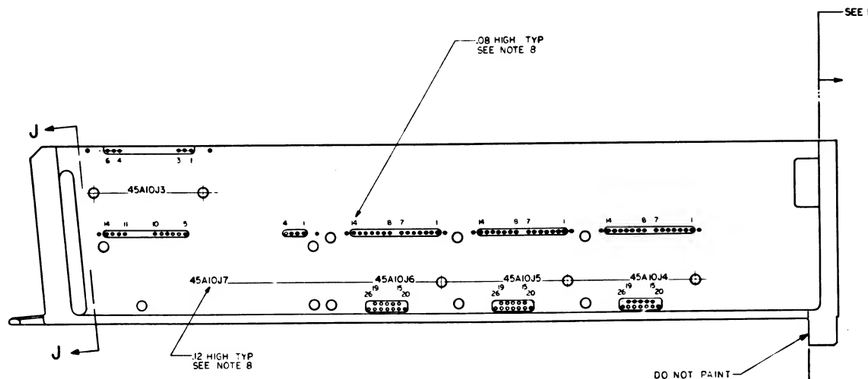


VIEW ROTATED 180°

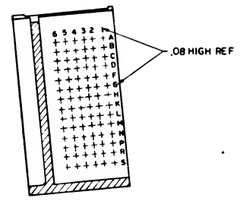








MARKING VIEWS



SECTION J-J

REV F THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINAL FINISH —	M I T INSTRUMENTATION LAB C-4000-066 MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON		
APPLICATION			
		DRAWN DATE DEC 1963 CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL	FRAME, TRAY 10
			CODE IDENT NO SIZE E NASA DRAW NO 1008110
			SCALE 1/1 WT SHEET 3 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR		
C	REVISED PER TDRR		
D	REVISED PER TDRR		
E	REVISED PER TDRR 6337F1		
F	REVISED PER TDRR		
G	REVISED PER TDRR 113 3		
H	REVISED PER TDRR 12596		
J	REVISED PER TDRR 18692		

SECTION D-D

VIEW A
SCALE 2/1

SECTION F-F

SECTION G-G
SCALE 2/1

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE $^{.14}_{.10}$ UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 AND FIND NO 2 WITH MIL P 8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING K10729-1 ALL SURFACES BETWEEN VIEWING PLANE END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND 1002110 TYPE II, USING K10729-3. CHARACTERS TO BE TYPE I CLASS 1 PER ND 1002122. CENTRALIZE AS SHOWN.
11. AFTER PLATING ROUGHENING OF THE SURFACES TO BE ENCAPSULATED IS PERMITTED. PLATING SURFACE MUST BE CONTINUOUS.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

1007150			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 ANGLES ± XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge Mass
DRWN R. Wagner DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

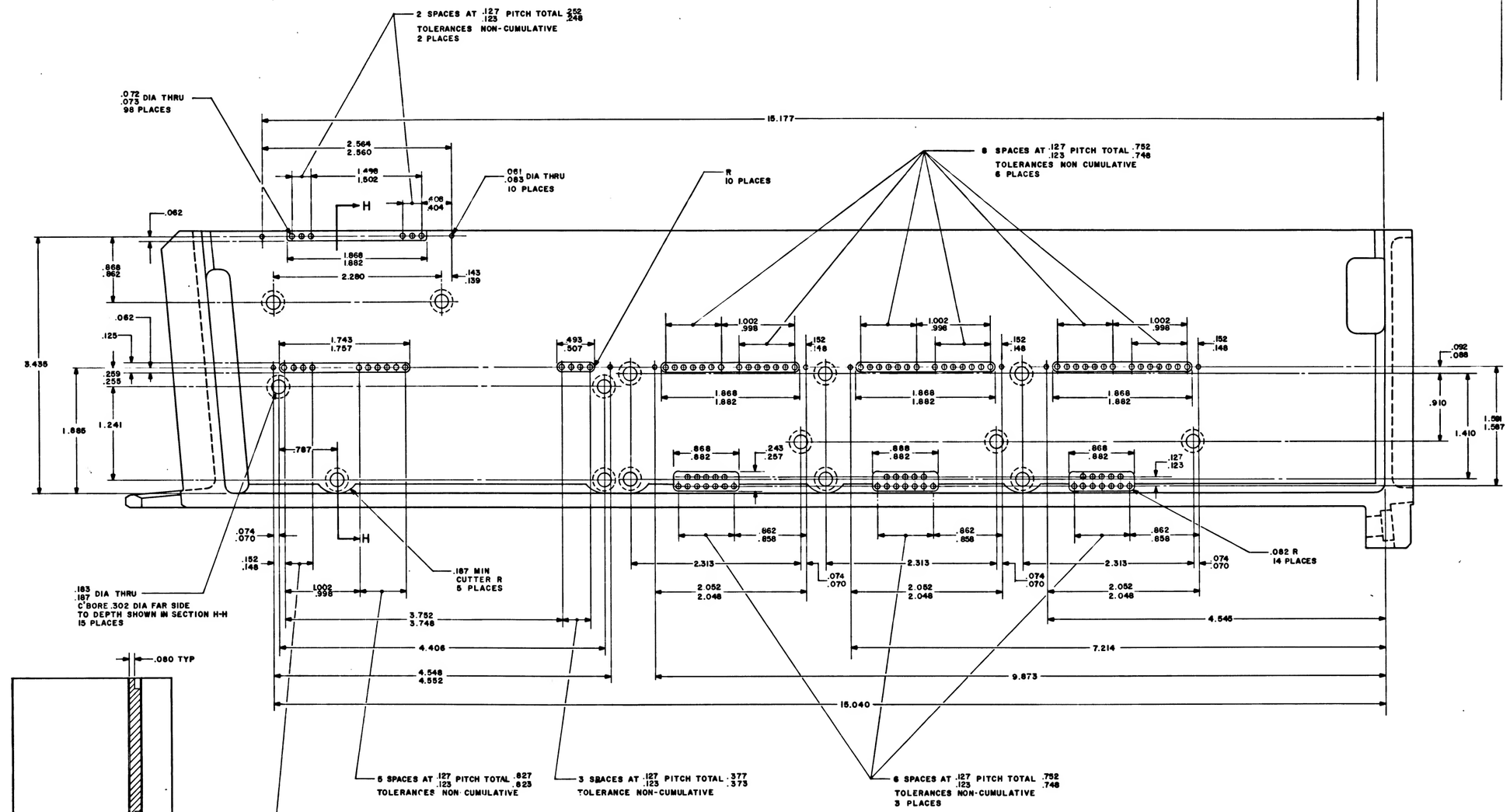
FRAME, TRAY 10

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	E	1008110

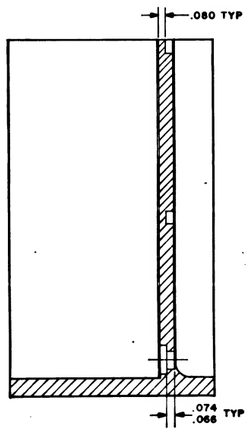
SCALE 1/1 WT SHEET 1 OF 2

1T 0118001

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
D	THIS SHEET ADDED PER TDRR 9116		
E	REVISED PER TDRR 03771		
F	REVISED PER TDRR		
G	REVISED PER TDRR 11E		
H	REVISED PER TDRR 12598		
J	REVISED PER TDRR 18692		



VIEW B-B
SCALE: 2:1



SECTION H-H

REV D THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge Mass
DRAWN Bonanno DATE 9-6-63
CHECKED C.F. Hall-Craig 9-9-63
APPROVAL Richard 9-9-63
APPROVAL
NASA APPROVAL 10-2-63
MIT APPROVAL

MANNED SPACECRAFT CENTE HOUSTON, TEXAS

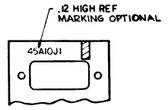
FRAME, TRAY 10

CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1008110
SCALE 2/1 | WT | SHEET 2 OF 2

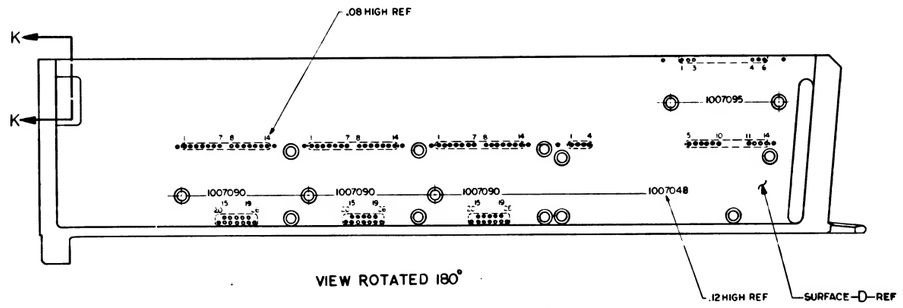
1008110

NOTICE - THIS DRAWING AND SPECIFICATIONS, OR OTHER DATA FURNISHED PURSUANT THERETO, ARE THE PROPERTY OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY, A NON-PROFIT EDUCATIONAL CORPORATION, AND ARE LOANED SUBJECT TO RETURN ON REQUEST. THEY ARE NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTERESTS OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY, AND ARE NOT TO BE REPRODUCED OR COPIED OR DISPOSED OF IN ANY MANNER WITHOUT THE PERMISSION OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY. NEITHER THIS NOR ANY OTHER IMPLIED LICENSE IS GRANTED HEREIN.

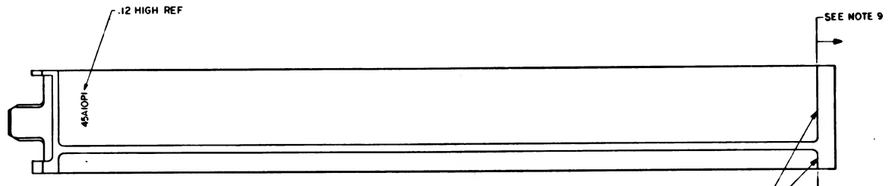
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
F	THIS SHEET ADDED PER TDRR	3/4/68	
G	REVISED PER TDRR 1810	8 SEP	
H	REVISED PER TDRR 1	8 SEP	
J	REVISED PER TDRR 1	MAR	

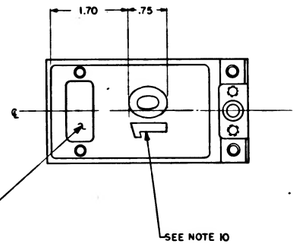


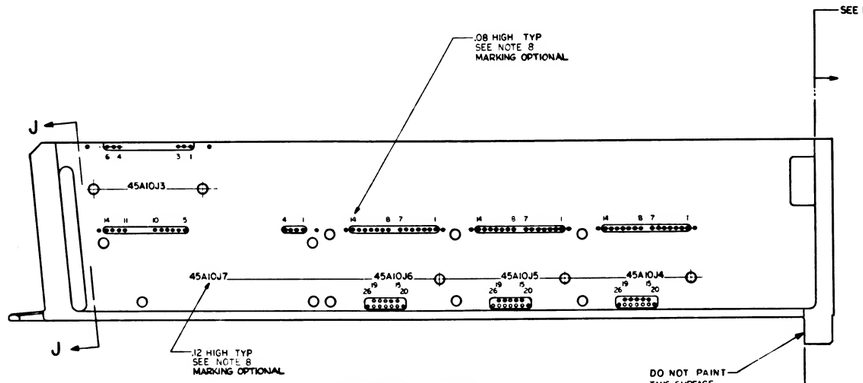
PARTIAL SECTION K-K

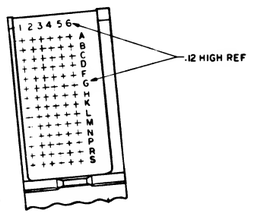


VIEW ROTATED 180°

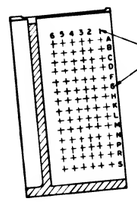








MARKING VIEWS



SECTION J-J

REV F THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± .XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY | USED ON
APPLICATION

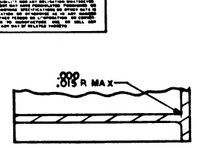
MIT INSTRUMENTATION LAB Cambridge 39, Mass.
data by | CONTRACT

DRAWN Gleason DATE DEC 1965
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

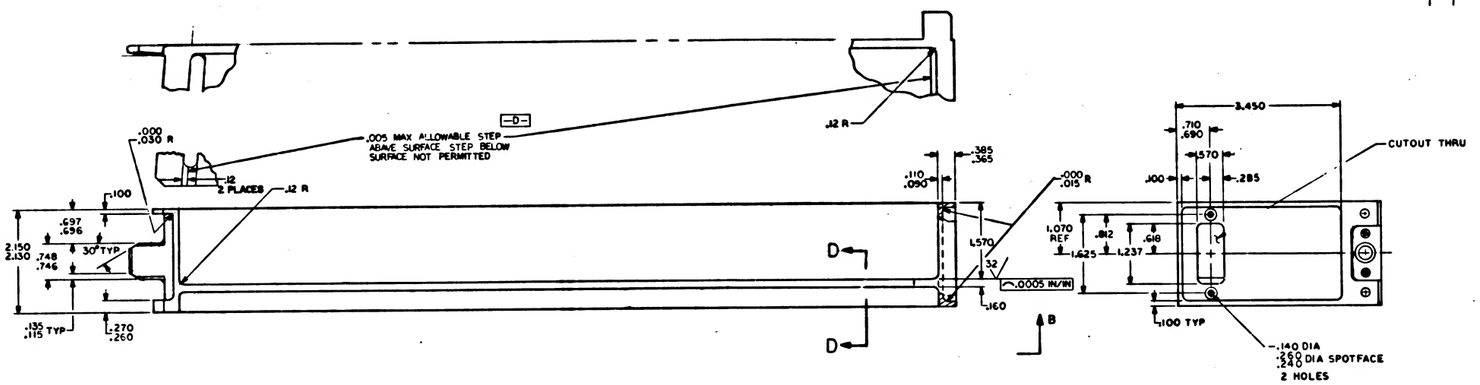
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

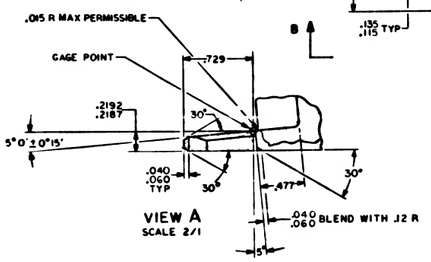
FRAME, TRAY 10

CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1008110
SCALE 1/1 | WT | SHEET 3 OF 3

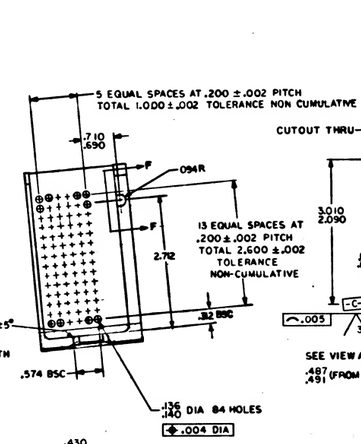


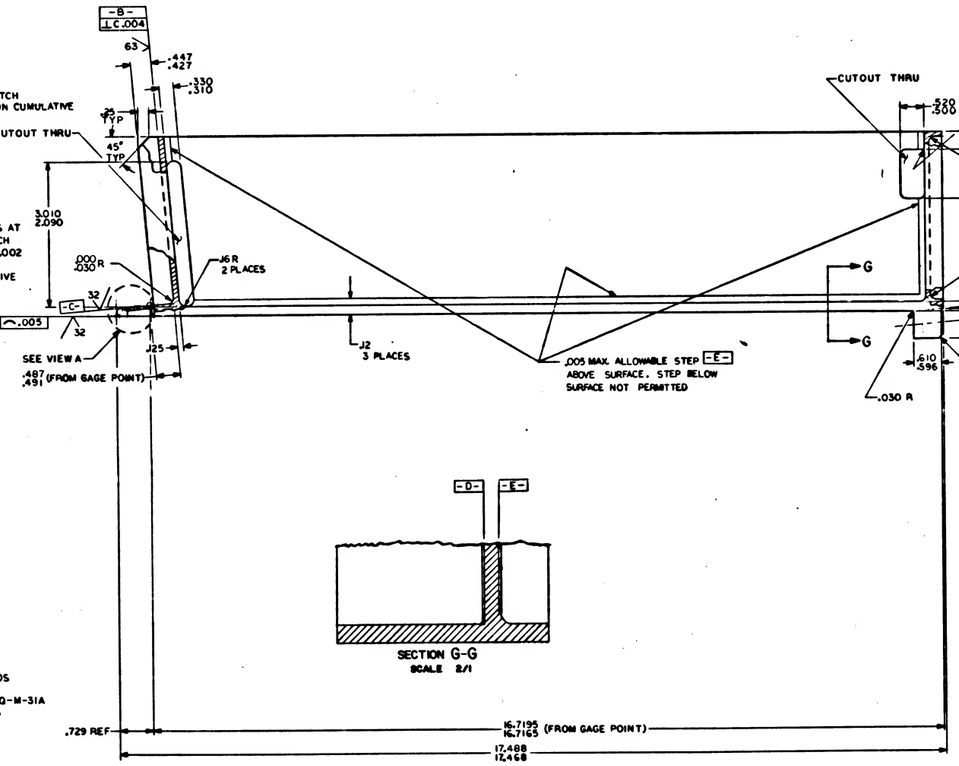
SECTION D-D

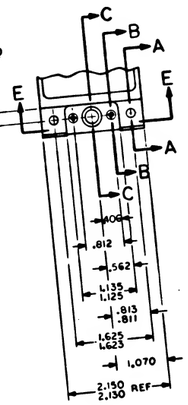




VIEW A
SCALE 2/1



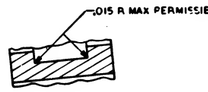






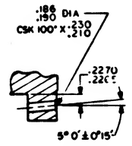
SECTION F-F

SECTION G-G
SCALE 2/1

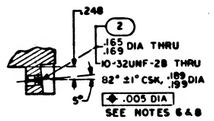


SECTION E-E

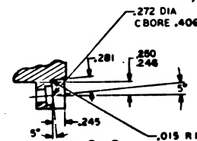
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ALL SURFACES TO BE PLATED. COPPER PLATE PER MIL-C-14550, CLASS 2. THEN ELECTROLESS NICKEL PLATE PER MIL-C-26074A, CLASS 1. ALL DIMENSIONS TO, AND FINISHES OF, PLATED SURFACES APPLY AFTER PLATING. FINISH MACHINING AFTER PLATING IS PERMISSIBLE AS LONG AS MINIMUM SPECIFIED THICKNESS OF NICKEL PLATE REMAINS. PLUG THREADED INSERT HOLES DURING PLATING.
8. COAT FIND NO. 1a. FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
9. MODULE MOUNTING SCREWS AND MODULE ELECTRICAL RECEPTACLES. THIS INFORMATION WILL BE ADDED TO DRAWING AS SOON AS IT IS AVAILABLE.



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008110-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MIT INSTRUMENTATION LAB Cambridge, Mass.
TOLERANCES ON FRACTIONS ± DECIMALS .XX ±.02 .XXX ±.005 ANGLES 0° 30'	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DO NOT SCALE THIS DRAWING	DRAWN DATE
MATERIAL SEE NOTE 2	CHECKED
HEAT TREATMENT —	APPROVED
FINISH SEE NOTE 6	APPROVED
NEXT ASSY / USED ON / APPLICATION	NASA APPROVAL
	MIT APPROVAL

FRAME, TRAY 10

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008110

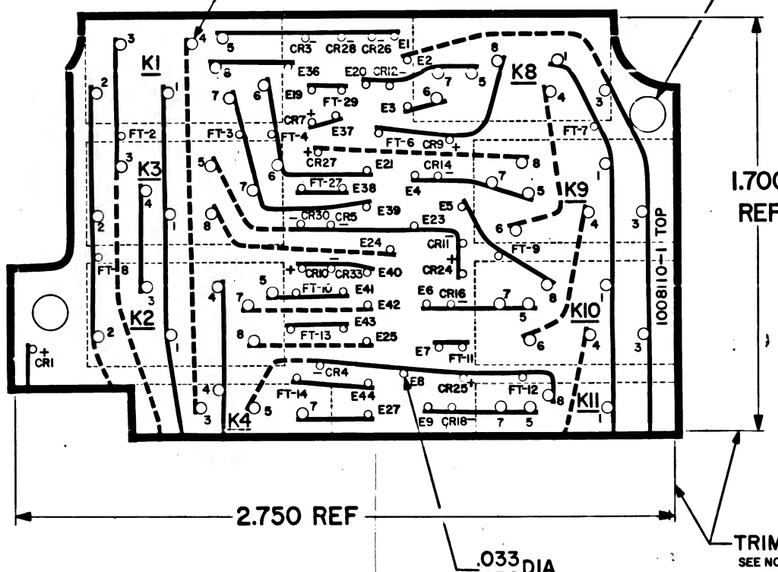
SCALE 1/1 | WT | SHEET 1 OF 2

1008110

INCHES
PHOTOGRAPHIC SCALE ONLY

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 02159			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02159	[illegible]	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 1 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± ## DECIMALS ± # ANGLES ± ##
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT ##
FINAL FINISH ##

M I T
INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DRAWN J. J. Bayley DATE 7-1-63
CHECKED [illegible] 7-1-63
APPROVAL [illegible] 7-2-63
APPROVAL [illegible] 7-2-63
NASA APPROVAL [illegible] 7/2/63
MIT APPROVAL [illegible] 7-2-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
RELAY AND DIODE MODULE

CODE IDENT NO. | SIZE D | NASA DRAWING NO 1008111
SCALE 4/1 | WT | SHEET 1 OF 2

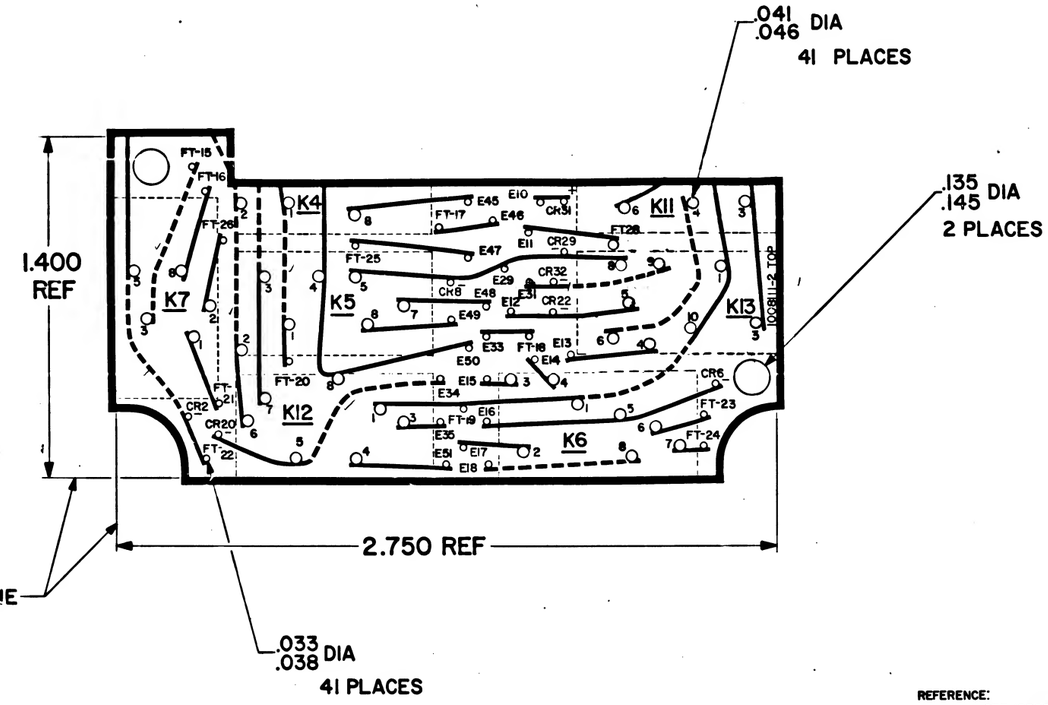
INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

1008111

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 31892

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 32157	7-23-69	



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIM LINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 2 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
	DO NOT SCALE THIS DRAWING
	MATERIAL
1007036	HEAT TREATMENT
NEXT ASSY / USED ON	FINAL FINISH
APPLICATION	

M I T INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. / CONTRACT
DRAWN L. J. Berkely DATE 6-6-63
CHECKED
APPROVAL N. Sheldon 7-2-63
APPROVAL
NASA APPROVAL 7/31/63
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

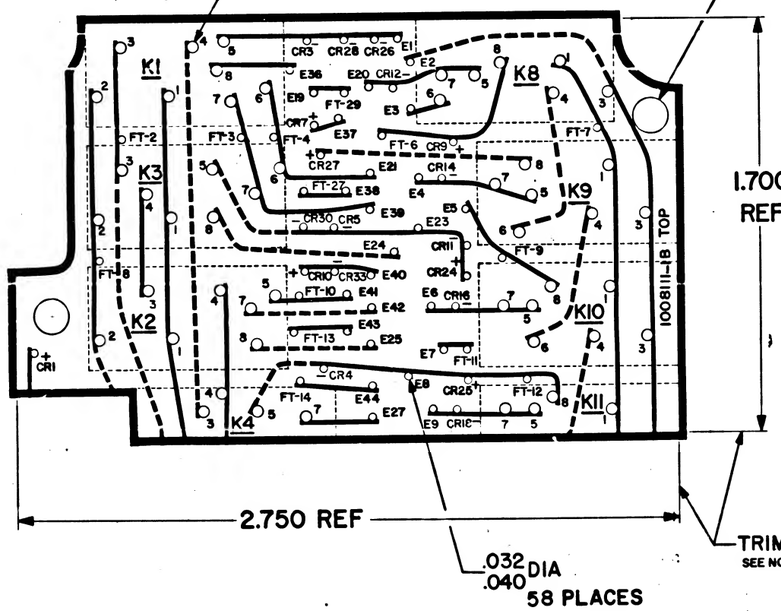
WIRING BOARD, TOP
RELAY AND DIODE MODULE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008111
SCALE 4/1 | WT | SHEET 2 OF 2

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TORRL 01492			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02159	7-2-63	
B	REVISED PER TDRR 02241	8-12-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 1 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DSG NO / CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN T.J. Bagley DATE 7-1-63
CHECKED K. Hoag 7-2-63
APPROVAL D. Laketa 7-2-63
APPROVAL J. C. Smith 7-2-63
NASA APPROVAL 7/2/63
MIT APPROVAL W Ryder 7-2-63

WIRING BOARD, TOP
RELAY AND DIODE MODULE

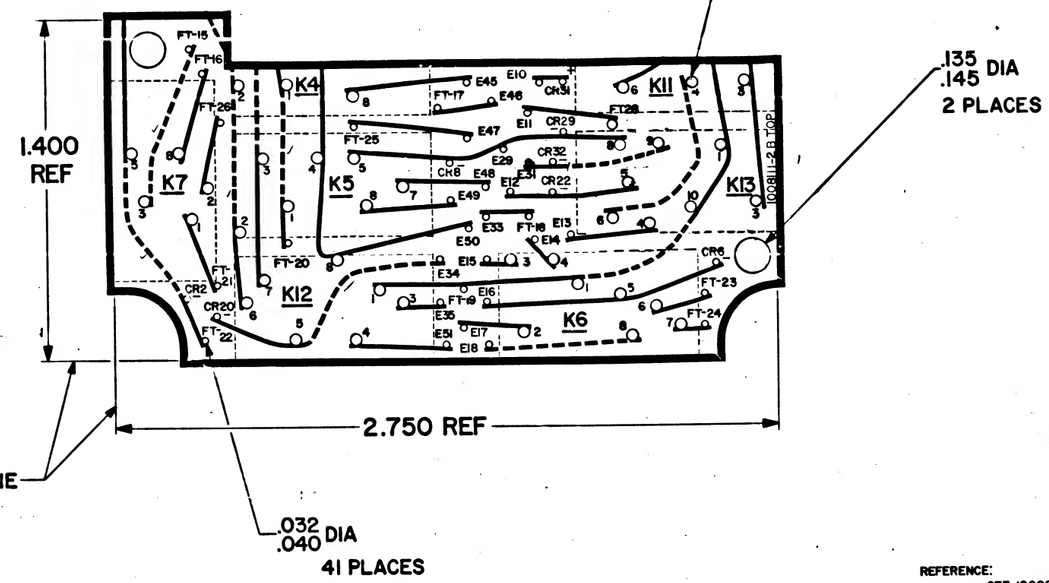
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008111
SCALE 4/1	WT	SHEET 1 OF 2

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

1008111 B

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDR12 01892			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02158	7-29-63	
B	REVISED PER TDRR 02641	8-21-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002135
4. CUT TO WITHIN .010 OF TRIM LINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 2 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± ## DECIMALS ± ## ANGLES ± ##
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT ##
FINAL FINISH ##

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN L.T. Berkely DATE 7-2-63
CHECKED
APPROVAL N. Sakelos 7-2-63
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
RELAY AND DIODE MODULE

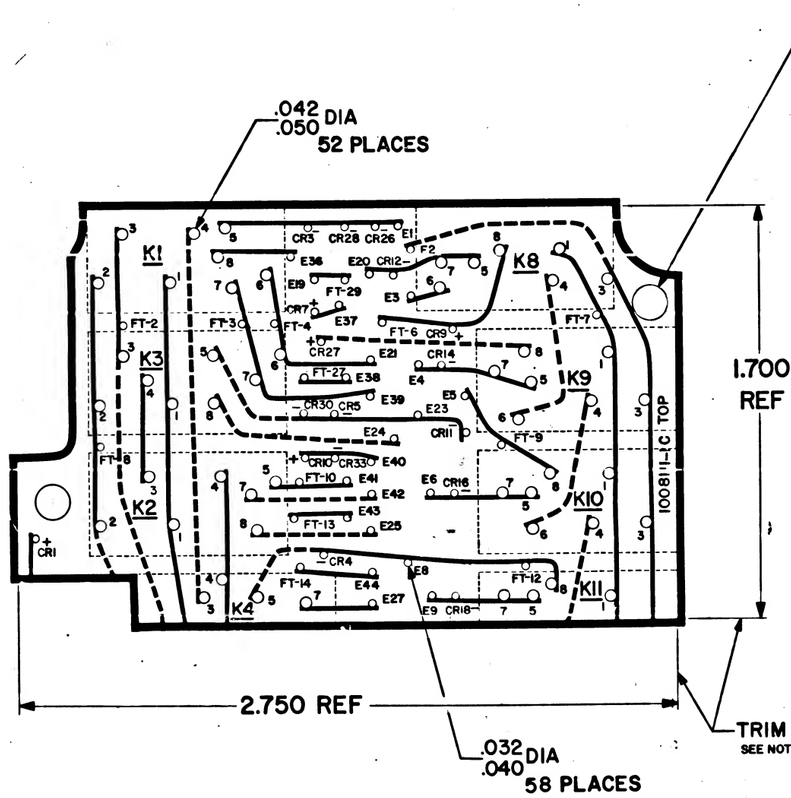
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008111
SCALE 4/1 | WT | SHEET 2 OF 2

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008111

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT DOES NOT THEREBY INCUR ANY RESPONSIBILITY WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

SYM	REVISIONS TO IRIL 014 92 DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03159	[illegible]	[illegible]
B	REVISED PER TDRR 03241	8-12-63	[illegible]
C	REVISED PER TDRR 03785	4-9-63	[illegible]



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 1 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE MASS
CONTRACT
DRAWN J. J. Blackley DATE 7-2-63
CHECKED K. C. Kingsbury 7-2-63
APPROVAL N. Sakellaris 7-2-63
APPROVAL L. C. Hewitt 7-2-63
NASA APPROVAL [illegible] 7/2/63
MIT APPROVAL [illegible] 7-2-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP - RELAY AND DIODE MODULE

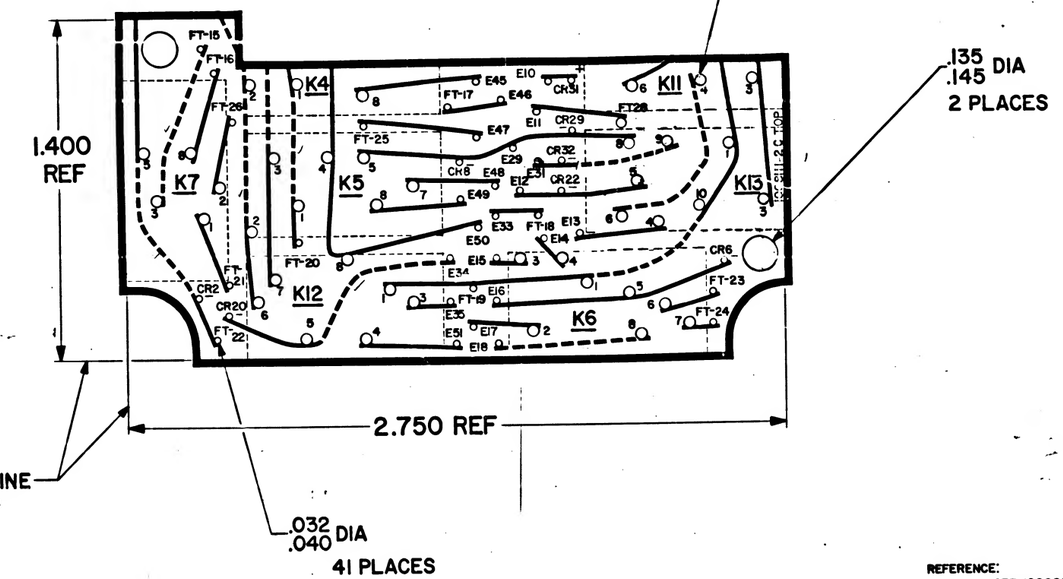
CODE IDENT NO. | SIZE D | NASA DRAWING NO 1008111
SCALE 4/1 | WT | SHEET 1 OF 2

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

1008111

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT WINDING DOES NOT IN ANY WAY IMPLY LICENSING OR ASSIGNMENT OF ANY PATENT RIGHTS, AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE, AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 01892			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02159	7-23-63	
B	REVISED PER TDRR 02541	8-21-63	
C	REVISED PER TDRR 03785	11-9-63	



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND1002138 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIM LINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008000 SHEET 2 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± ++ DECIMALS ± ++ ANGLES ± ++
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT ++
FINAL FINISH ++

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN T. Berkley DATE 7-2-63
CHECKED
APPROVAL 7-2-63
APPROVAL 7-2-63
NASA APPROVAL 11/15/63
MIT APPROVAL 2 July 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
RELAY AND DIODE MODULE

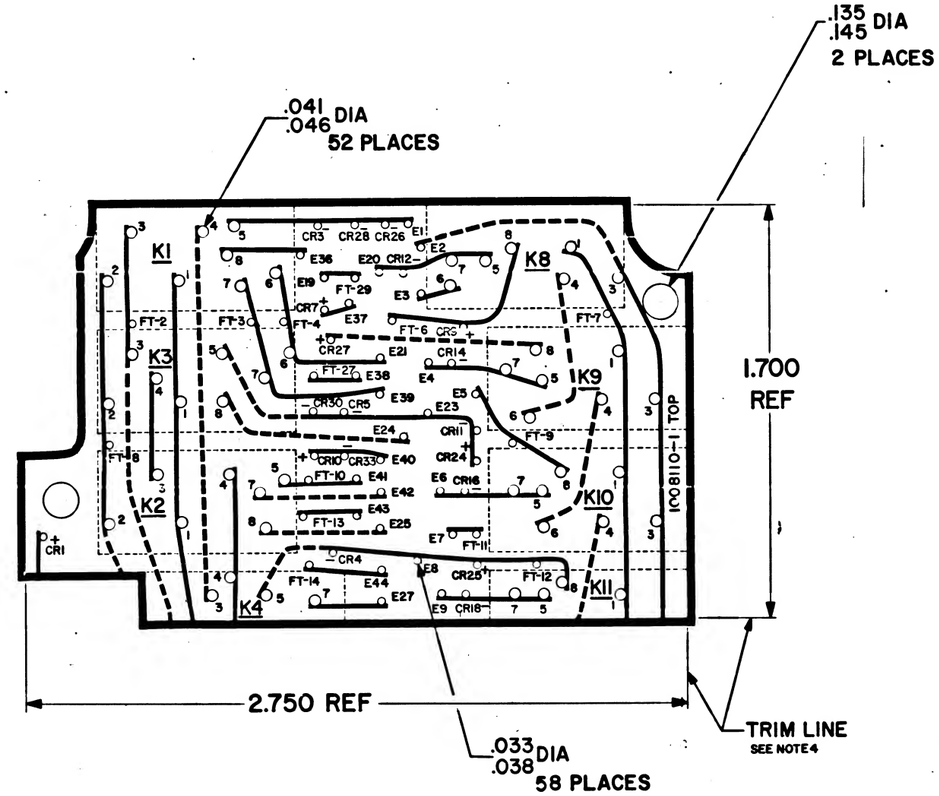
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008111
SCALE 4/1 | WT | SHEET 2 OF 2

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

1008111 C

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TORR 01492			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 1 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/64 DECIMALS ± .01 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN T. J. Dagbeley DATE 7-2-63
CHECKED R. P. Engelmann 7-2-63
APPROVAL N. Sakellaris 7-2-63
APPROVAL L. C. Hamilton 7-2-63
NASA APPROVAL 7/2/63
MIT APPROVAL 7/2/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
RELAY AND DIODE MODULE

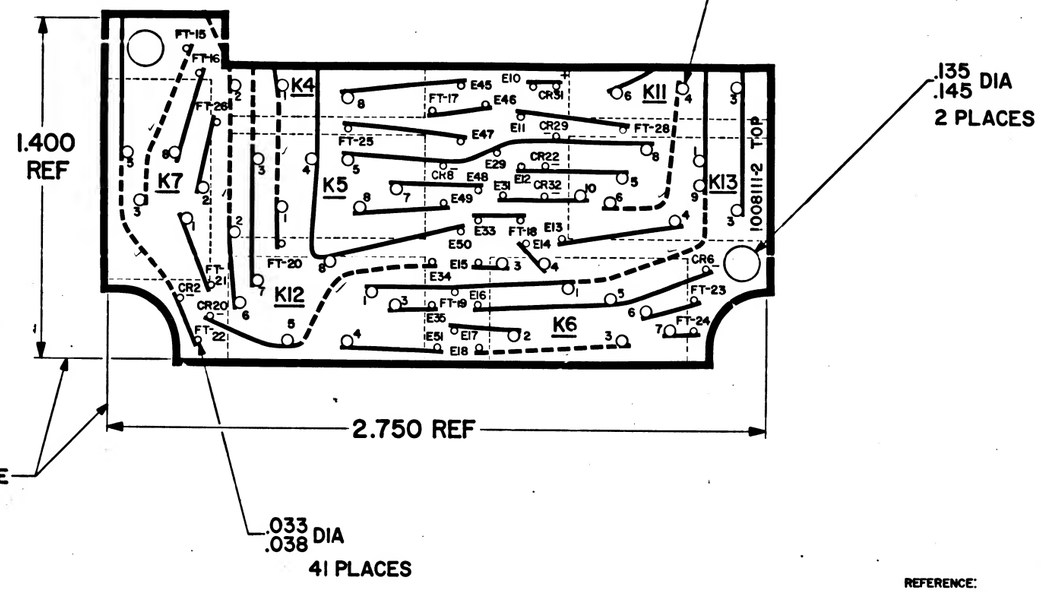
CODE IDENT NO.	SIZE	NASA DRAWING NO
	D	1008111
SCALE 4/1	WT	SHEET 1 OF 2

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

1008111

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDCR 01892			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:

1. INTERPPET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK GLASS EPOXY PER ND1002136 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE
5. BROKEN LINES DENOTE SLEEVING

REFERENCE:
SEE 1008090 SHEET 2 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN T. T. Turkelly DATE 12-6-63
CHECKED
APPROVAL
APPROVAL L. C. Smith 12-6-63
NASA APPROVAL W. J. Downing 11/27/63
MIT APPROVAL W. Kaufman 2 July 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
RELAY AND DIODE MODULE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008111
SCALE 4/1 | WT | SHEET 2 OF 2

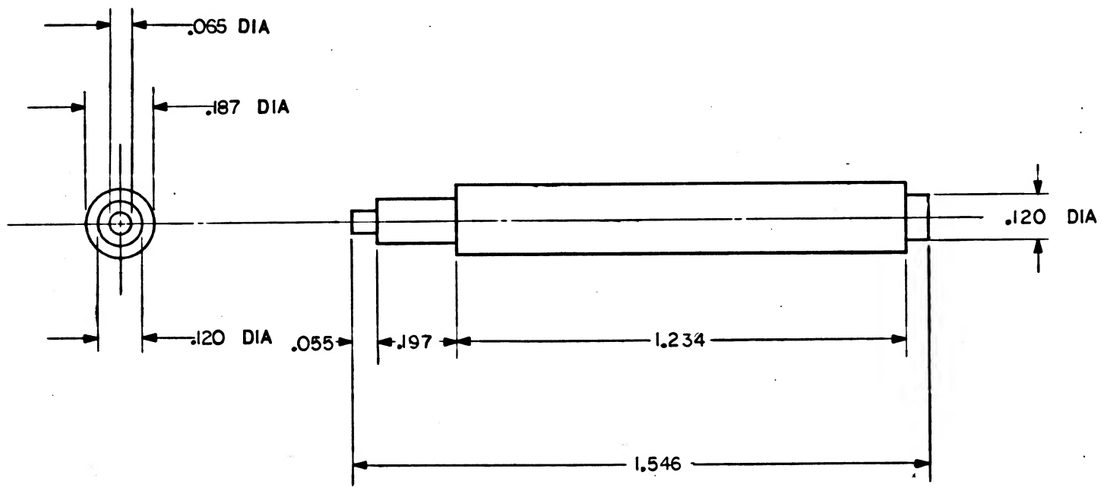
INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008111

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

A	2118001	M

REVISIONS TDRR 01892			
SYM	DESCRIPTION	DATE	APPROVAL
A	CHANGED PER TDRR 02159	7-23-63	TJ / WK



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ROD, GLASS EPOXY PER ND1002135 TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

MASTER

1007036	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN C.R. G 7/23/63 DATE 6-10-63
CHECKED C.R. Kings Bury 2 Jul 63
APPROVAL M Sakolsk 7-2-63
APPROVAL A.C. Smith 7-2-63
NASA APPROVAL W.J. Stevens 7/2/63
MIT APPROVAL W Kuffer 2 July 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

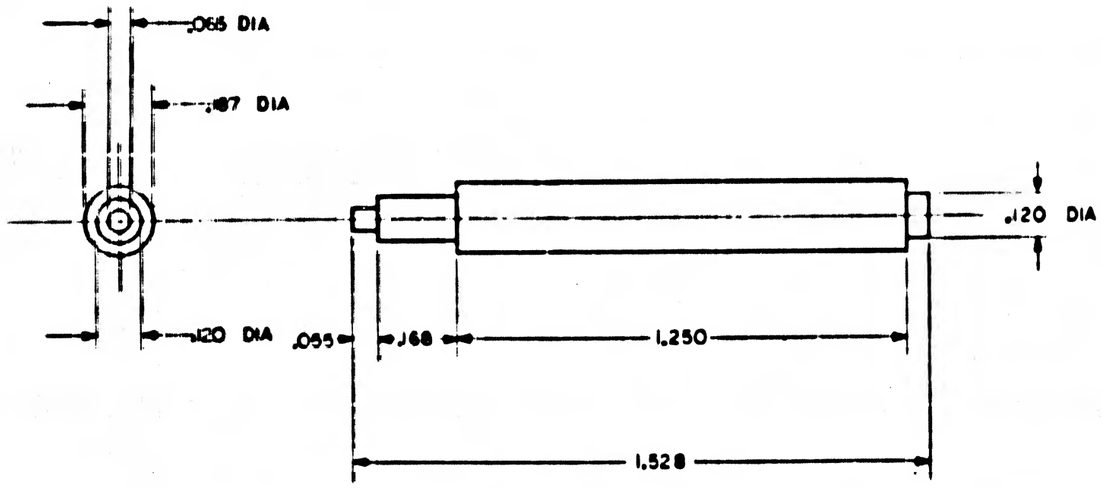
SPACER, INSULATED
RELAY AND DIODE MODULE

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008112
SCALE 4/1	WT	SHEET 1 OF 1

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

1008112 A

2118001



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ROD, GLASS EPOXY PER NO1002135 TYPE GEE

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

1007086	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT
INSTRUMENTATION LAB
Cambridge Mass

DRAWN C.R. Gerstein DATE 2-8-63
CHECKED C.C. Draper Jerry A. Hoag
APPROVAL 2-8-63
APPROVAL 2-8-63
NASA APPROVAL 2-16-63
MIT APPROVAL 2/15/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SPACER, INSULATED
RELAY AND DIODE MODULE

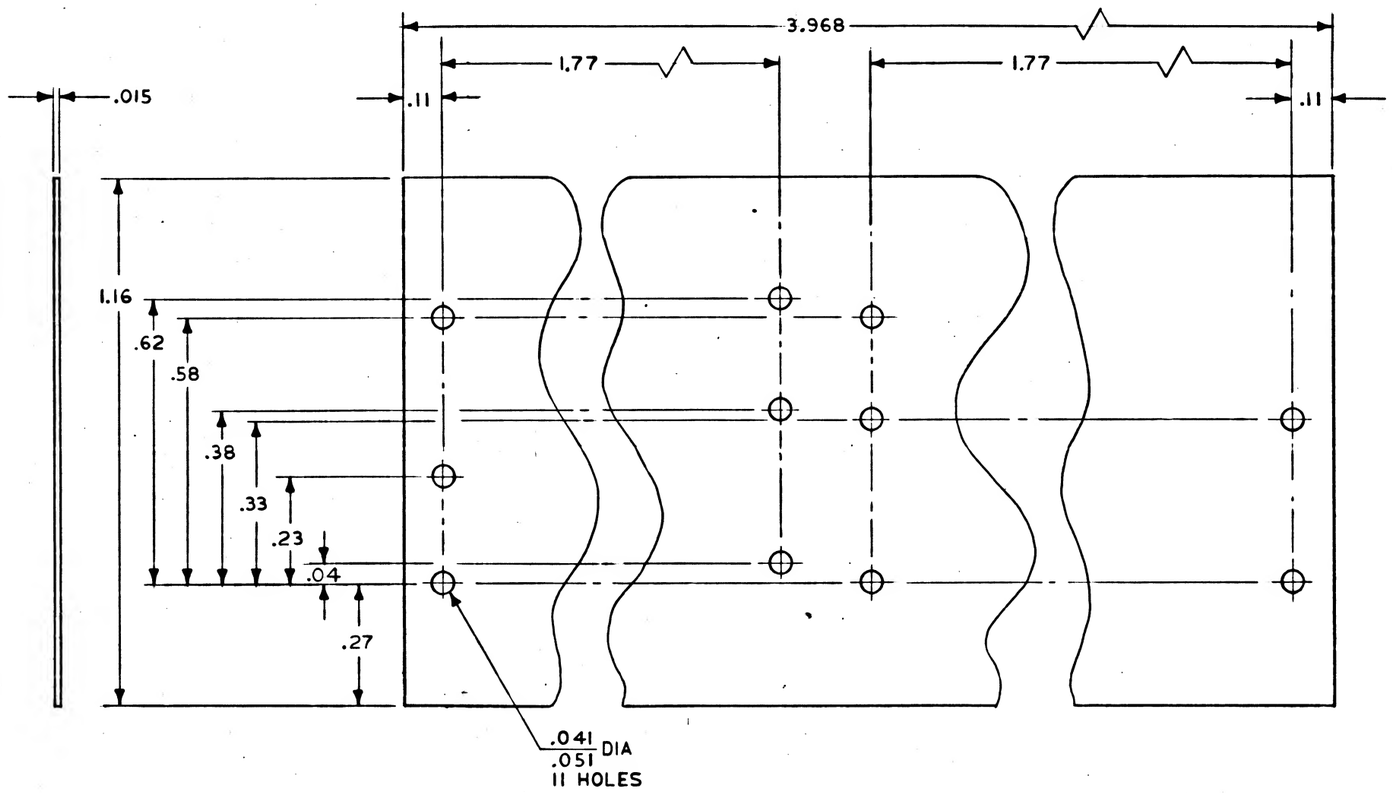
CODE IDENT NO | SIZE C | NASA DRAWING NO 1008112
SCALE 4/1 | WT | SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

E118001

REVISIONS TOR12018KJ			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES

1. INTERPERT DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: GLASS EPOXY PER ND 1002135 TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007074	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN R.W. Krueger DATE 17 Jun 63
CHECKED R.R. Ragan Jr. 28 Jun 63
APPROVAL D.B. Eisert 7/1/63
ROVAL
NASA APPROVAL W.J. Dunnigan 7/2/63
MIT APPROVAL W.W. Kaufman 7/1/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WAFER BOARD
CDU RESOLVER LOADS

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008113
SCALE 5/1	WT	SHEET 1 OF 1

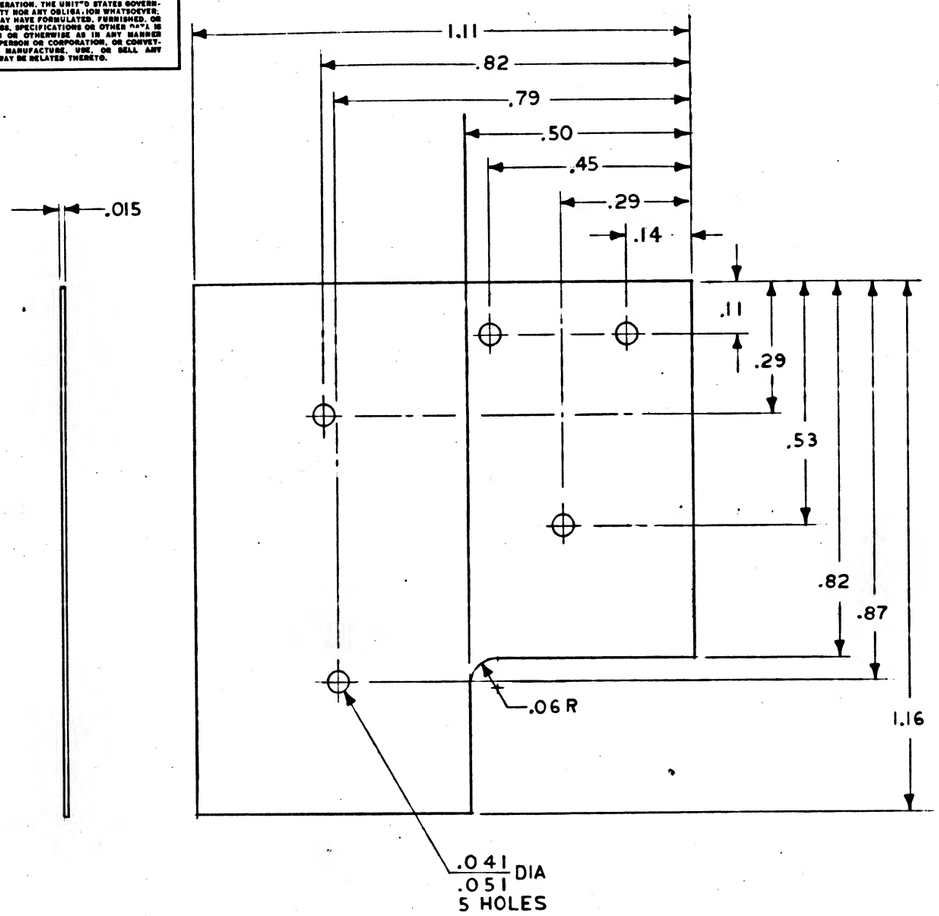
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008113

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008114

REVISIONS TOR R 01 & 03			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES

1. INTERPET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: GLASS EPOXY PER ND 1002135 TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007074	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN R.W. Kuzze DATE 17 Jan 63
CHECKED C.P. Kuzze 17 Jan 63
APPROVAL D. Britt 2/1/63
APPROVAL
NASA APPROVAL W.J. Stuart 2/2/63
MIT APPROVAL W. Kuzze 2/6/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WAFER BOARD
CDU RESOLVER LOADS

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008114
SCALE 5/1	WT	SHEET 1 OF 1

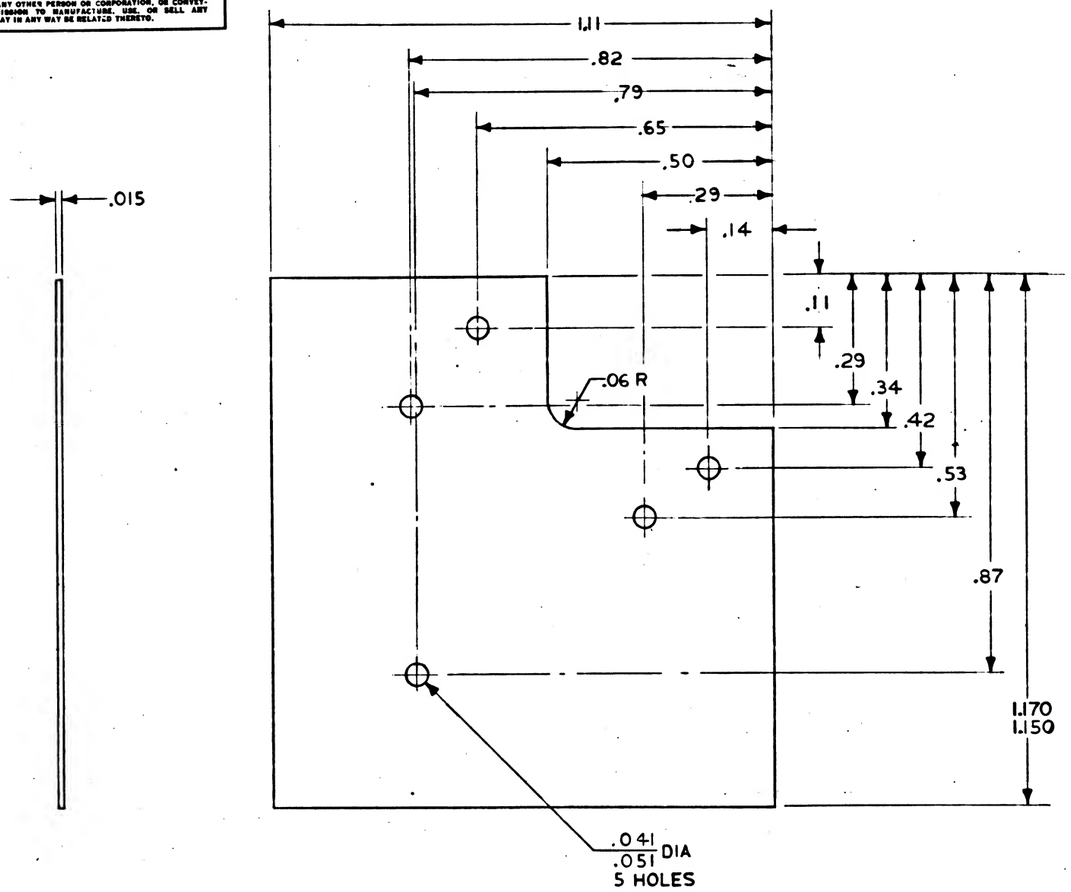
INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008114

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 01843			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02879	28 AUG	RWW

A 1008115



NOTES

1. INTERPERT DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: GLASS EPOXY PER ND1002135, TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007074	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN R. W. Kluge DATE 17 Jan 63
CHECKED R. R. Ragan Jan 28 Feb 63
APPROVAL A. L. Hopkins 2/1/63
APPROVAL
NASA APPROVAL W. J. Sears 7/2/63
MIT APPROVAL W. Kaufman 2 Feb 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WAFER BOARD
C DU RESOLVER LOADS

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008115

SCALE 5/1 | WT | SHEET 1 OF 1

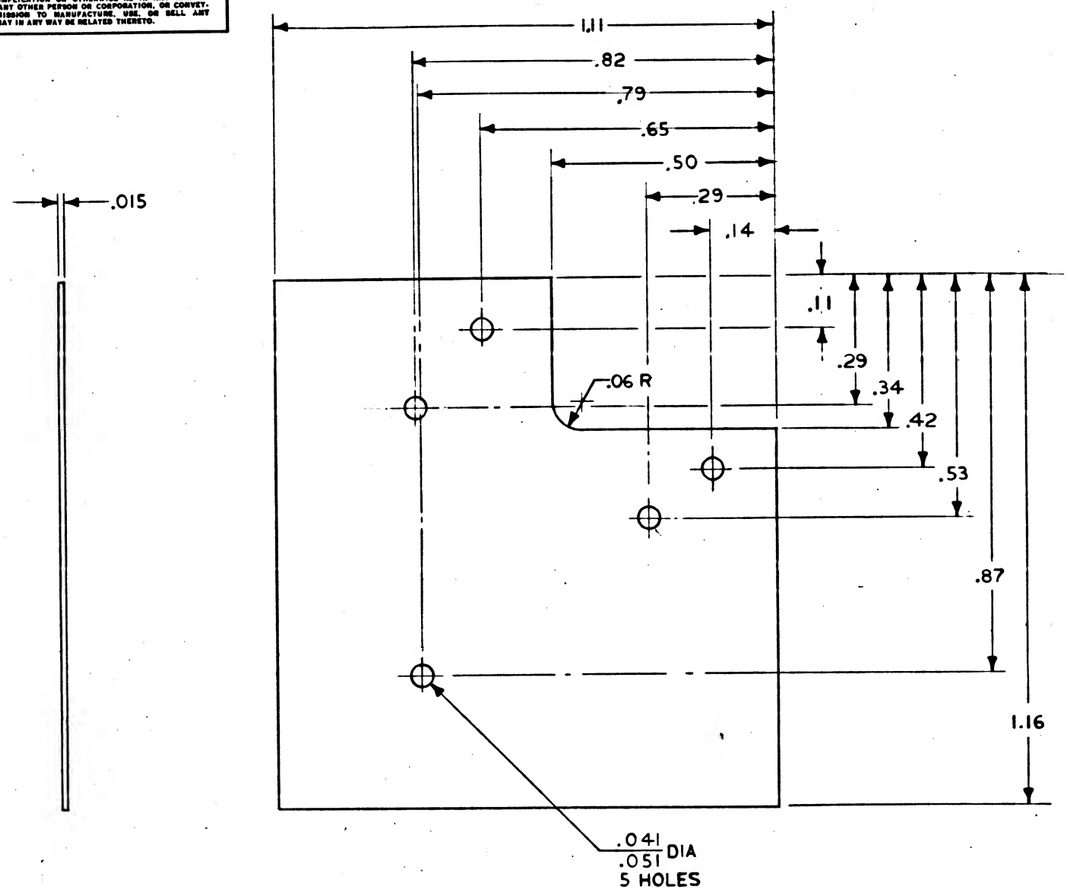
INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008115

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA, IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008115

REVISIONS TOPR 01843			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES

1. INTERPERT DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: GLASS EPOXY PER ND1002135, TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007074	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ±.02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN R.W. Kruger DATE 17 Jan 63
CHECKED L.P. Ringbloom 28 Jan 63
APPROVAL C.B. Stat 2/1/63
APPROVAL
NASA APPROVAL W.J. Sawyer 7/2/63
MIT APPROVAL W.F. Hoffman 2 Feb 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WAFER BOARD
C DU RESOLVER LOADS

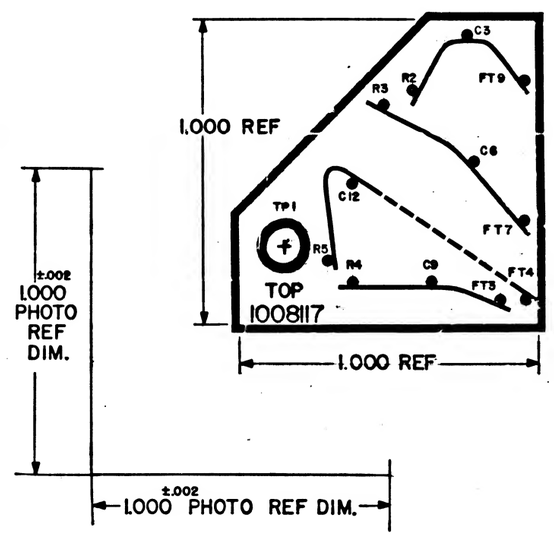
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008115
SCALE 5/1	WT	SHEET 1 OF 1

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008115

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

SYM	REVISIONS TORR 02061 DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .010 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE IA

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

NEXT ASSY	USED ON	APPLICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 4
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN J. Sanders DATE 7-15-63
CHECKED E. Stubbs DATE July 12, 1963
APPROVAL A. Hoag DATE 7-15-63
APPROVAL
NASA APPROVAL 7/17/63
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
LAMPS, BACK UP MODE

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008116
SCALE 5/1	WT	SHEET 1 OF 1

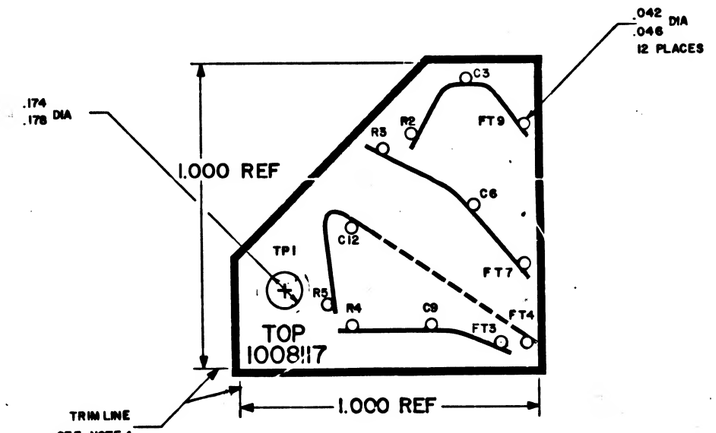
MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008001

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO

REVISIONS TORR 0206			
SYM	DESCRIPTION	DATE	APPROVAL



REFERENCE:
DRAWING NO.1008116 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL- D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002136 TYPE GEB
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
	DO NOT SCALE THIS DRAWING
	MATERIAL SEE NOTE 2
1007087	HEAT TREATMENT
NEXT ASSY / USED ON	FINAL FINISH
APPLICATION	

M I T INSTRUMENTATION LAB CAMBRIDGE MASS.
DRAWN J. Crowley DATE 2-1-63
CHECKED [illegible]
APPROVAL [illegible] 7-16-63
APPROVAL
NASA APPROVAL [illegible] 7/17/63
MIT APPROVAL [illegible] 7/16/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD TOP
LAMPS, BACK UP MODE

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008117
SCALE 5/1	WT	SHEET 1 OF 1

1008117

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS TDRR 07216			
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06644	5/27/64	

∀ 8118C01

3.875
REF

2.184
REF

1.000 ±.002
TO REF DIM.

SCRIBED BY MIL-T 7928
OCESS OR METHOD
DING SHALL NOT EXCEED

SIGNER
ns 2, STYLE 1A

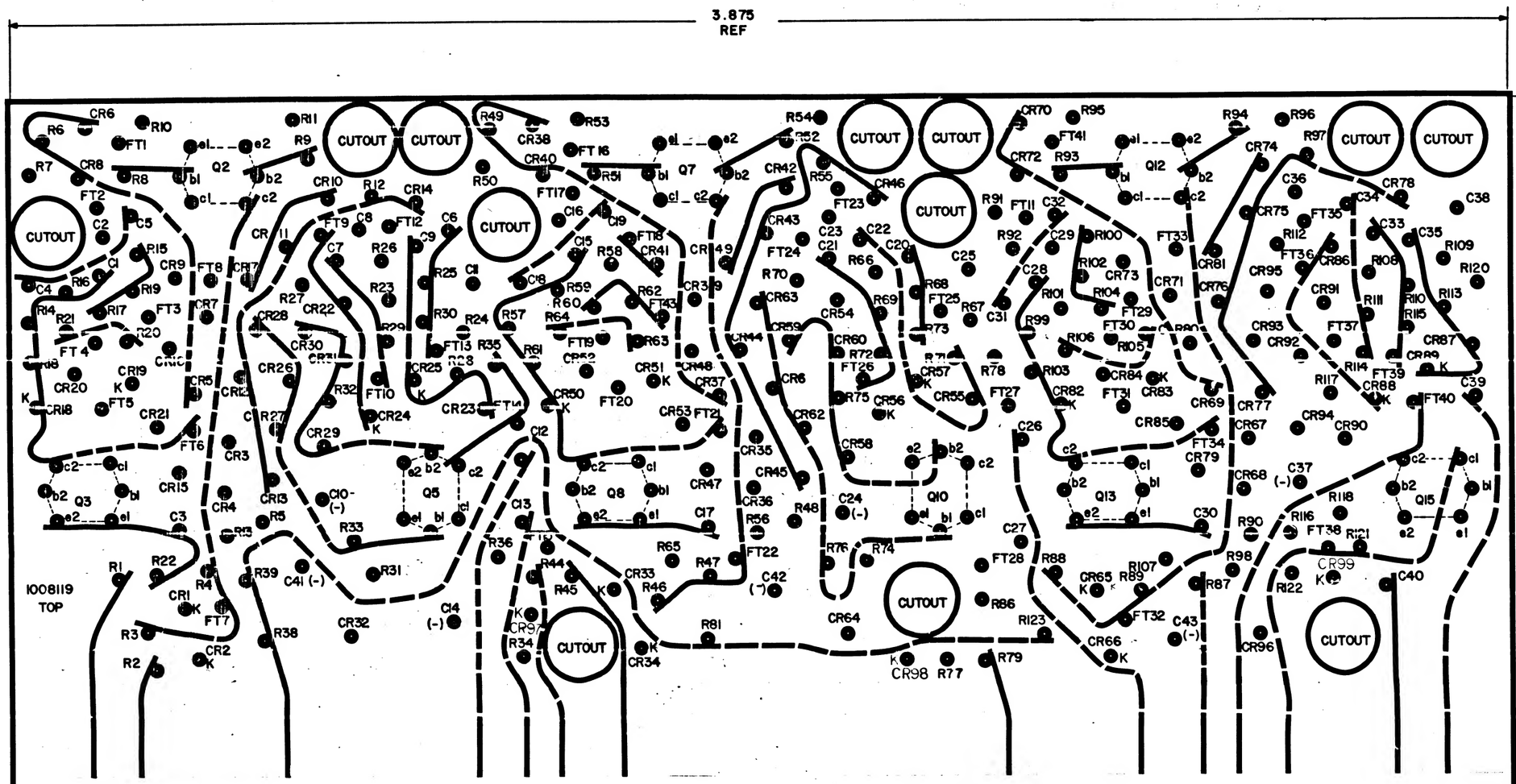
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
	LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	M I T INSTRUMENTATION LAB Cambridge Mass	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		DO NOT SCALE THIS DRAWING	DRAWN [signature] DATE 6/26/63	PHOTOGRAPHIC MASTER
		MATERIAL SEE NOTE 5	CHECKED	WIRING BOARD, TOP FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT
		HEAT TREATMENT	APPROVAL [signature] 7/24/63	
NEXT ASSY	USED ON	FINAL FINISH	APPROVAL	
APPLICATION			NASA APPROVAL [signature] 7/24/63	CODE IDENT NO. / SIZE J / NASA DRAWING NO. 1008118
			MIT APPROVAL [signature]	SCALE 10/1 / WT / SHEET 1 OF 1

1008118 A

1008118 A

PHOTOGRAPHIC SCALE ONLY



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .008/.009 THICK PER L-F 340, TYPE IB, CLASS 2, STYLE IA

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANG ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 6
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

QTY REQD

INSTRUMENTATION

DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06644	FEB 64	
B	REVISED PER TDRR 07012	2 MAR 64	

8 8118001

3.875
REF

2.184
REF

1.000 ±.002
PHOTO REF DIM.

STANDARDS PRESCRIBED BY MIL-D-70327
N MADE BY PROCESS OR METHOD
NSIONAL VARIATIONS SHALL NOT EXCEED

TO DIMENSIONS SHOWN
40.1 B, CLASS 2, STYLE IA

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
Contract NAS 9-97
DRAWN
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

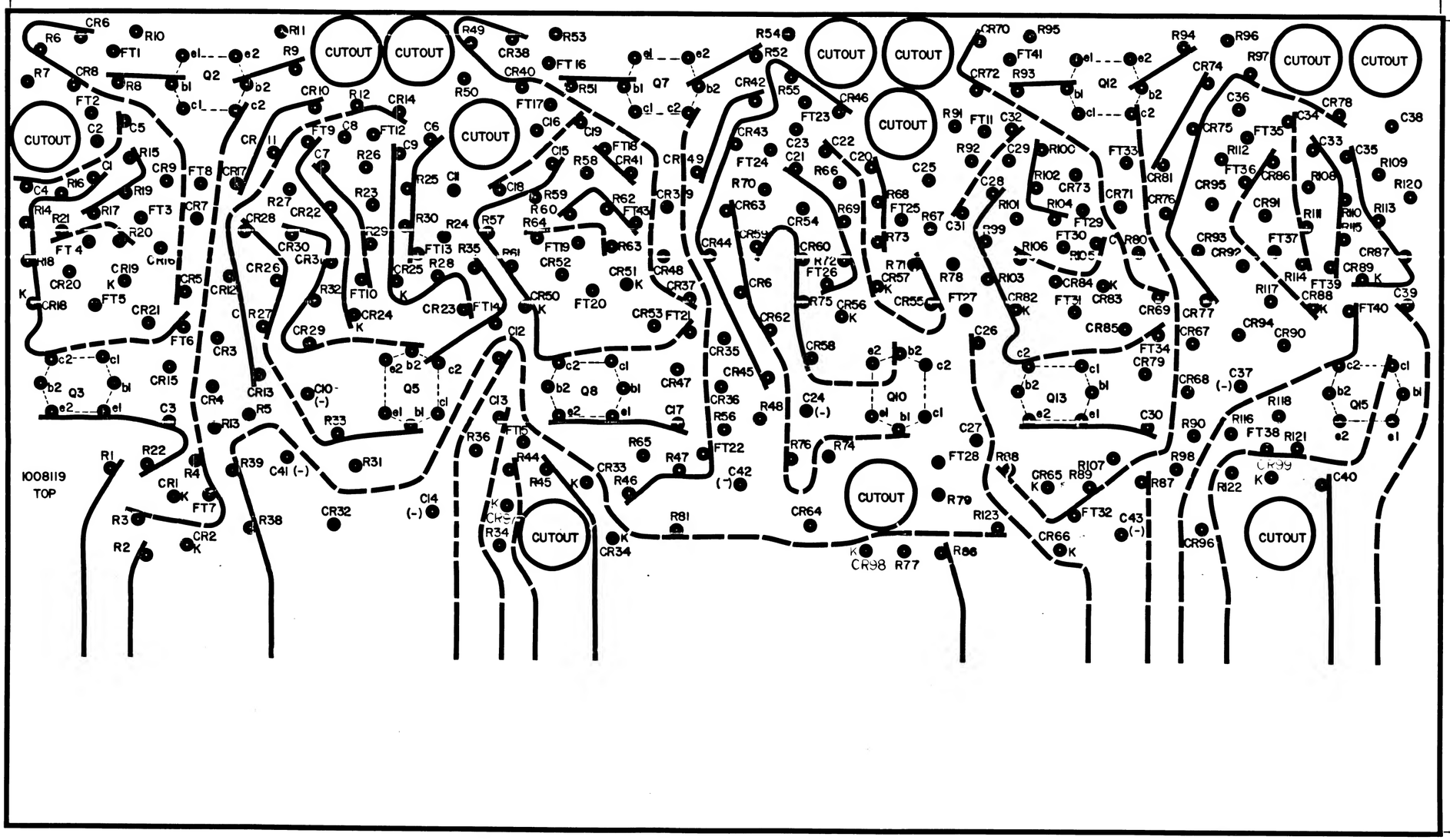
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD, TOP
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

CODE IDENT NO | SIZE J | NASA DRAWING NO. 1008118
SCALE 10/1 | WT | SHEET 1 OF 1

1008118 B

27 1008118



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F 340, TYPE IB, CLASS 2, STYLE IA

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 5
HEAT TREATMENT	
FINAL FINISH	
NEXT ASSY	USED ON
APPLICATION	

M.I.T. INSTRUMENTATION LABORATORY, Cambridge 39, Mass.
DR. CHKD APPROVAL APPROVAL M/A APPROVAL M APPROVAL

1008119

8118001

REVISIONS			
	DESCRIPTION	DATE	APPROVAL
B	REVISED PER TORR CTO 12	5/MAY 64	
C	REVISED PER TORR CTO 131	5 APR 65	

3.875 REF

2.184 REF

1.000 ±.002
PHOTO REF DIM.

...MENSIONS PRESCRIBED BY MIL-D-70327
...E BY PROCESS OR METHOD
...MATION IS SHALL NOT EXCEED

...SHOWN
...ED 18, CLASS 2, STYLE IA

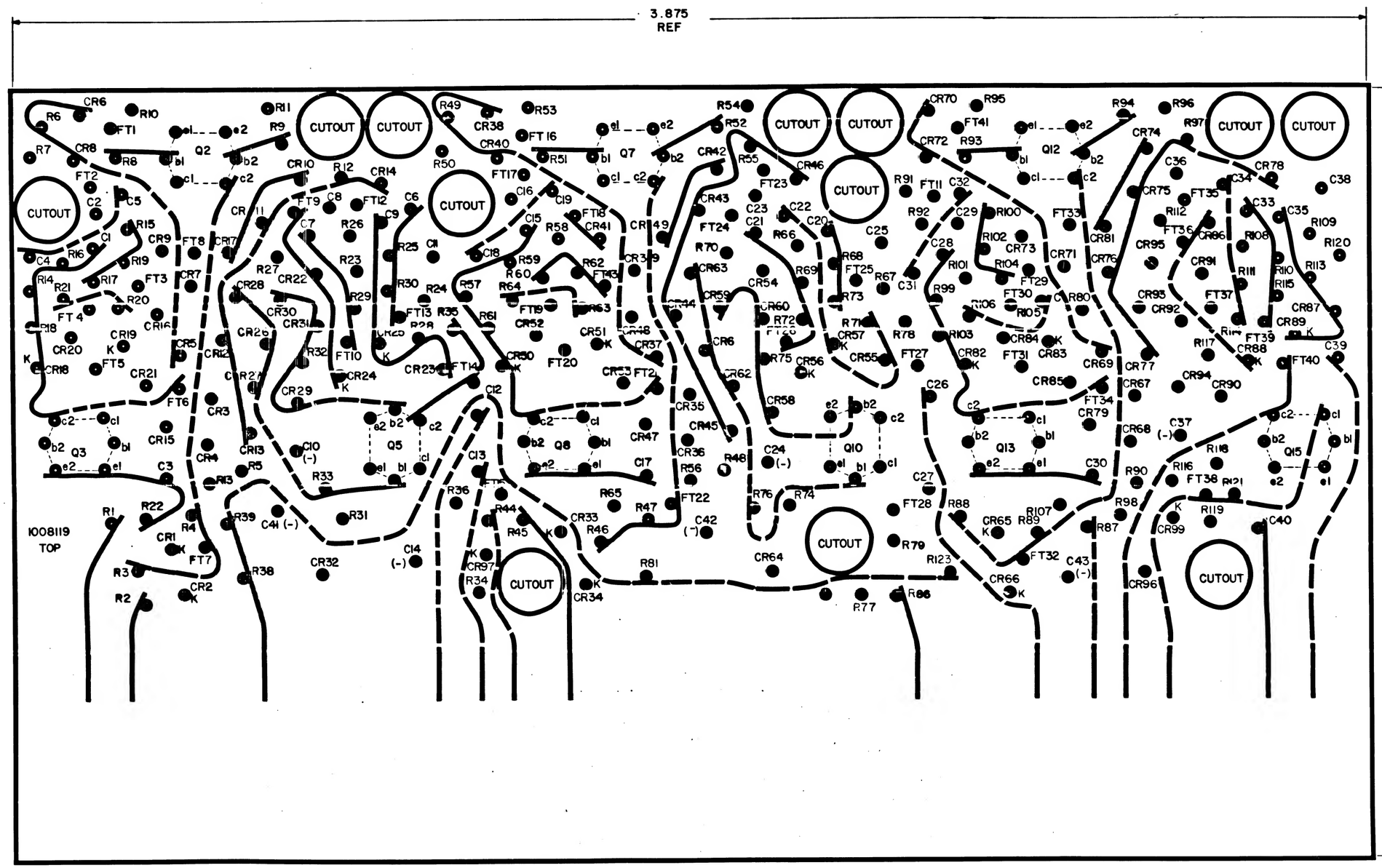
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING	M.I.T. INSTRUMENTATION LAB Cambridge, Mass. CONTRACT NAS 9-153	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
MATERIAL SEE NOTE 5	DRAWN [illegible] DATE 6/16/63	PHOTOGRAPHIC MASTER
HEAT TREATMENT	CHECKED	WIRING BOARD, TOP
FINISH	APPROVAL [illegible] 2/12/63	FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT
NEXT ASSY	USED ON	NASA APPROVAL [illegible]
APPLICATION		MIT APPROVAL [illegible] 2/14/63
		CODE IDENT NO. 10/1 SIZE J NASA DRAWING NO 1008118 SHEET 1 OF 1

2

1008118 A



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F 340, TYPE IB, CLASS 2, STYLE IA

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES:	
FRACTIONS DECIMALS ANGLES	
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 5
HEAT TREATMENT	
FINISH	
NEXT ASSY USED ON	
APPLICATION	

9118001

REVISIONS TOE8-03-70

3.875
REF

2.184
REF

1.000 ±.002
PHOTO REF DIM.

STANDARDS PRESCRIBED BY MIL-D-70327
GRADE BY PROCESS OR METHOD
FINAL VARIATIONS SHALL NOT EXCEED

DIMENSIONS SHOWN
TYPE 1B, CLASS 2, STYLE 1A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
		LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 5
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

M I T
INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DRAWN [signature] DATE 6-4-70
CHECKED
APPROVAL [signature] 7-29-70
APPROVAL
NASA APPROVAL [signature] 7-29-70
MIT APPROVAL [signature] 7-29-70

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD TOP
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

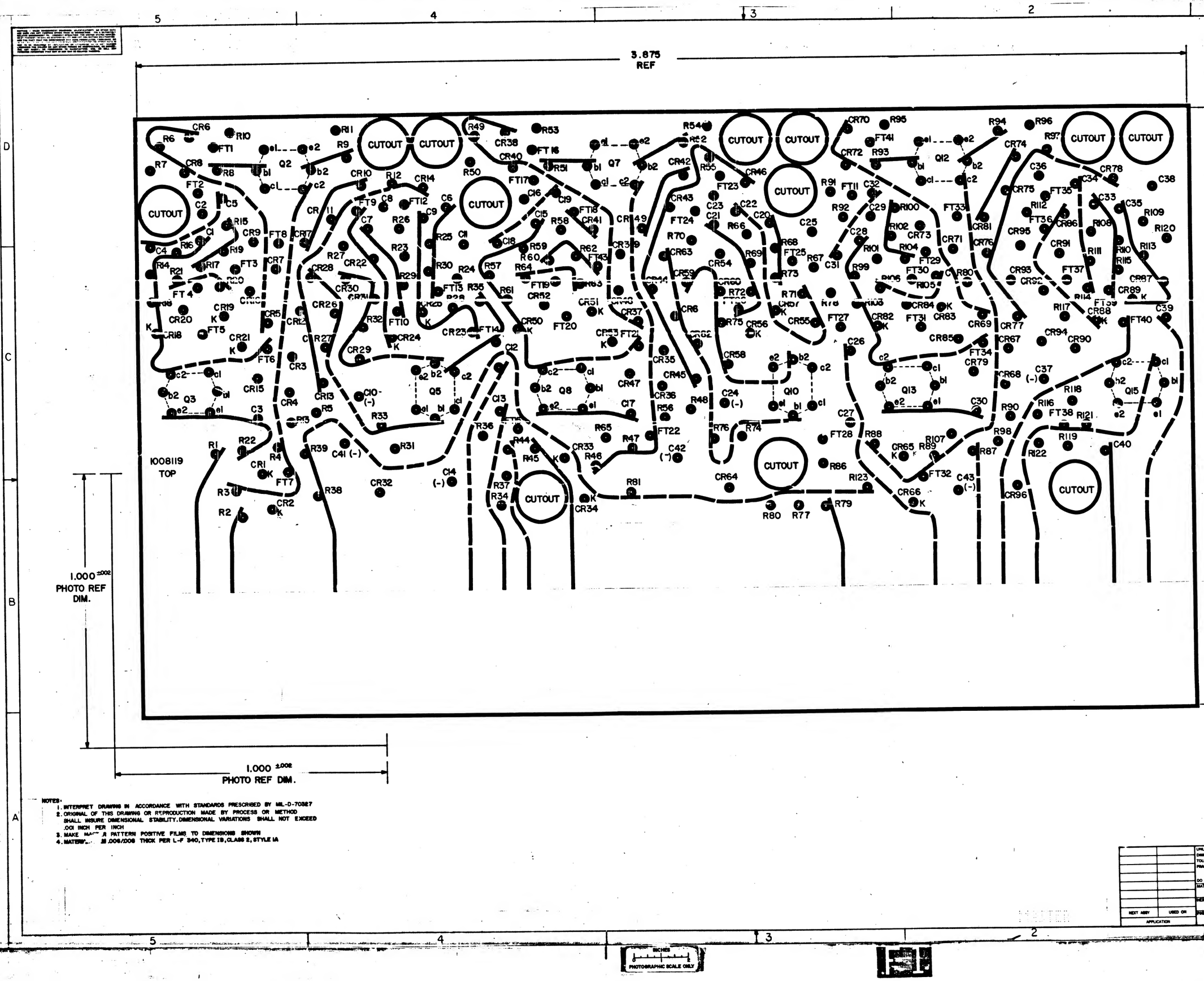
CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008118
SCALE 10/1 | WT | SHEET 1 OF 1

1008118

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

F2



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL .005/.006 THICK PER L-F 340, TYPE IB, CLASS 2, STYLE IA

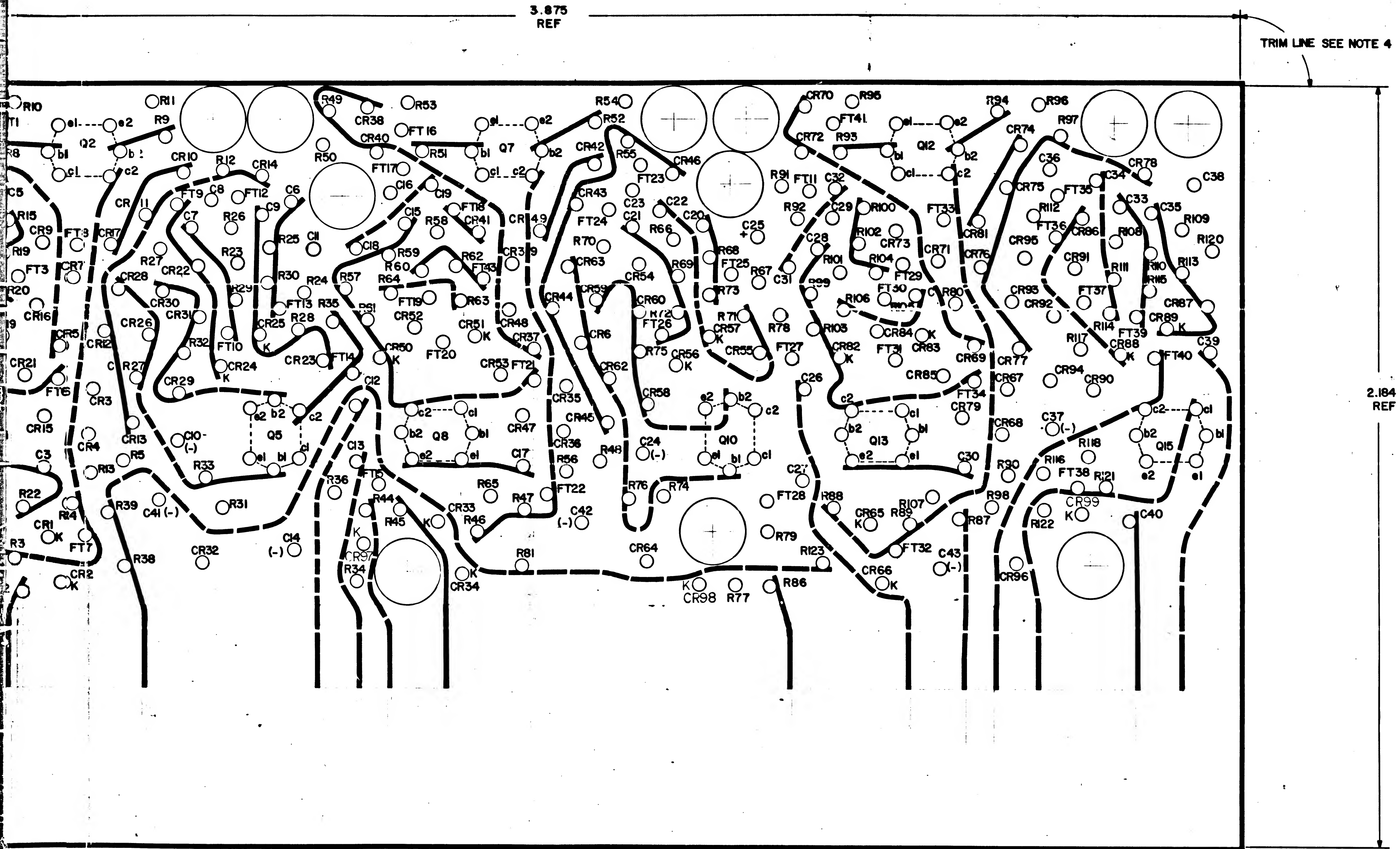
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± .01 ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 6
FINISH BLACK
PARENT

INCHES
PHOTOGRAPHIC SCALE ONLY

∀ 6118001

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06643	25FEB64	



REFERENCE:
DRAWING NO. 1008118 FOR PHOTOGRAPHIC MASTER

...SCRIBED BY MIL-D-70327
...PE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

1007096	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN ... DATE ...
CHECKED
APPROVAL ... 7/20/63
APPROVAL
NASA APPROVAL ...
MIT APPROVAL ... 24 July 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT

CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008119
SCALE 10/1 | WT | SHEET 1 OF 1

1008119

6118001 A

INCHES 0 2 PHOTOGRAPHIC SCALE ONLY

V 611800 REVISED

1008118

3.875 REF

TRIM LINE SEE NOTE 4

.163
.168 DIA
12 PLACES

.035
.040 DIA
350 HOLES

1008119
TOP

2.184 REF

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE

QTY REQD	PART OR IDENTIFYING NO	LIST OF

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	M I T INSTRUMENTATION LAB Cambridge Mass.
		TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	DRAWN CHECKED APPROVAL APPROVAL
		DO NOT SCALE THIS DRAWING	MATERIAL SEE NOTE 2
			HEAT TREATMENT
1007086			FINAL FINISH
NEXT ASSY	USED ON	APPLICATION	NASA APPROVAL MIT APPROVAL

REFERENCE:
DRAWIN
PHOTO

INCHES
PHOTOGRAPHIC SCALE ONLY

3.875
REF

TRIM LINE SEE NOTE 4

2.184
REF

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDMR 06643	25 FEB	
B	REVISED PER TDMR 07131	3 JAN 68	

6 6118001

REFERENCE:
DRAWING NO. 1008118 FOR
PHOTOGRAPHIC MASTER

STANDARDS PRESCRIBED BY MIL-D-70327
1002135 TYPE GEE
1002133

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

1007086		
NEXT ASSY	USED ON	
APPLICATION		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINISH

M I T
INSTRUMENTATION LAB
Cambridge, Mass.
DRAWN J. Broughton DATE 2-8-67
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

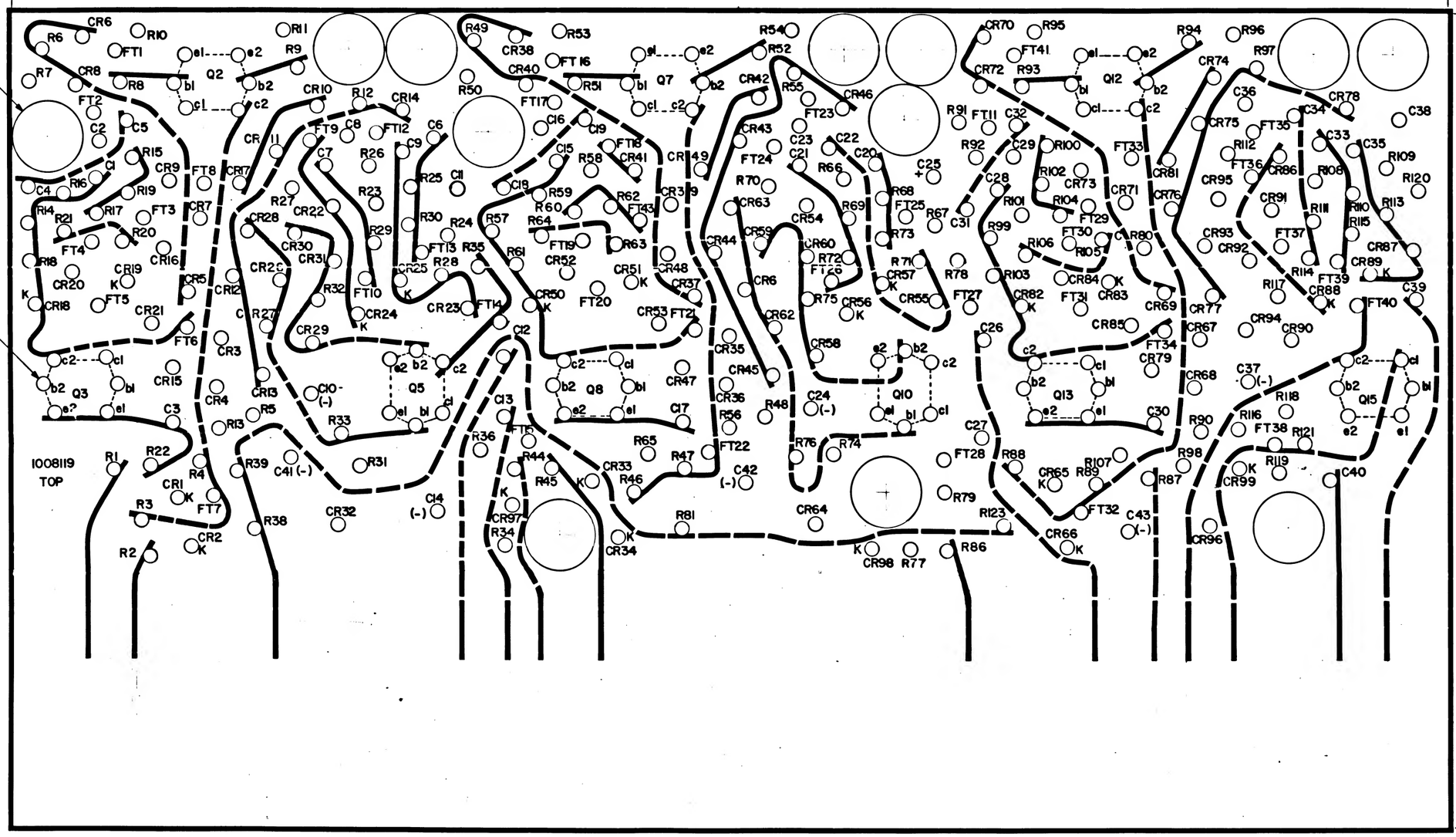
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008119
SCALE 10/1 | WT | SHEET 1 OF 1

1008119 B
A

2



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIMLINE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON FRACTIONS DECIMALS ANGLES	
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
HEAT TREATMENT	
FINISH	
1007086	
NEXT ASSY	USED ON
APPLICATION	

QTY REQD

DRAWN

CHECKED

APPROVAL

APPROVAL

NASA APPROVAL

GT APPROVAL

3.875
REF

TRIM LINE SEE NOTE 4

2.184
REF

D 6118001

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06643		
B	REVISED PER TDRR 07731		
C	REVISED PER TDRR 10914		

REFERENCE :
DRAWING NO. 1008118 FOR
PHOTOGRAPHIC MASTER

ALL EDGES PER MIL-D-70327
CLASS TYPE SEE
2133

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

1007086
NEXT ASSY | USED ON
APPLICATION

M I T
INSTRUMENTATION LAB
CAMBRIDGE 39, MASS.
Contract NAS 9-497
DRAWN J. Bonapalle DATE 6/26/63
CHECKED
APPROVAL D. R. Stout 7/29/63
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

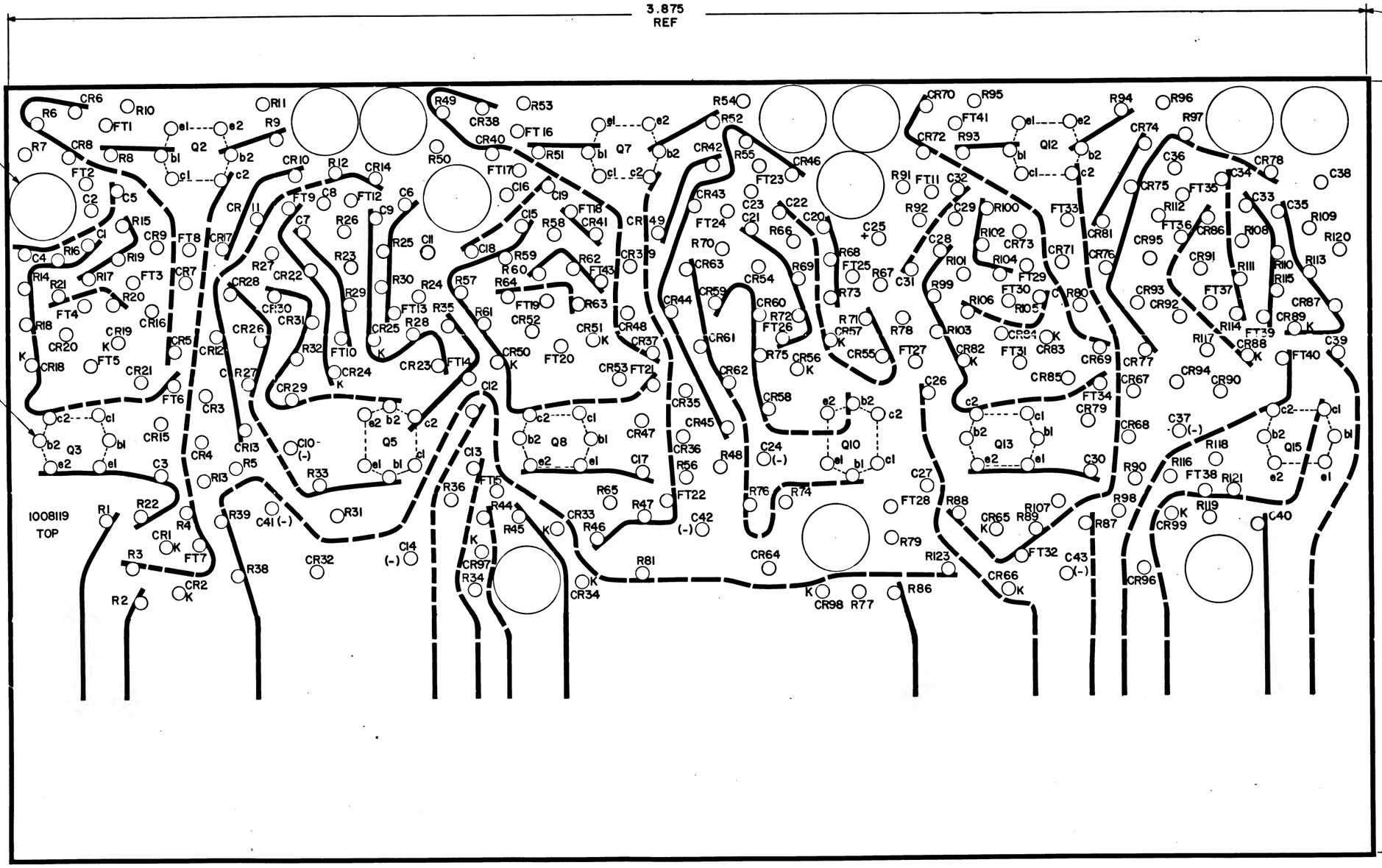
WIRING BOARD, TOP
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

NASA APPROVAL
MIT APPROVAL W. Wrigley 24 July 63

CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008119
SCALE 10/1 | WT | SHEET 1 OF 1

6118001 C

27100811119



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIMLINE

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
		TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
		DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTE 2
1007086		HEAT TREATMENT
NEXT ASSY	USED ON	FINISH
APPLICATION		

DRAWN
CHECKED
APPROVAL
APPROVAL
MFG APPR
MFT APPR

1/1008119

3.875
REF

TRIM LINE SEE NOTE 4

2.184
REF

REFERENCE :
DRAWING NO. 1008118 FOR
PHOTOGRAPHIC MASTER

STANDARDS PRESCRIBED BY MIL-D-70327
1002135 TYPE GEE
1002133

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR C6643		
B	REVISED PER TDRR C7 31		
C	REVISED PER TDRR 10914		
D	REVISED PER TDRR 16852	MAR 65	

d 6118001

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

1007086
NEXT ASSY | USED ON
APPLICATION

INSTRUMENTATION LAB
CAMBRIDGE MASS
DRAWN [illegible] DATE 6/26/63
CHECKED
APPROVAL [illegible] 7/25/63
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible] 24 July 63

Contract NAS 9-497

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

CODE IDENT NO | SIZE J | NASA DRAWING NO 1008119
SCALE 10/1 WT SHEET 1 OF 1

2/1100811 19

D 6118001 A

1008119

3.875
REF

TRIM LINE SEE NOT

.171 DIA
.168
12 PLACES

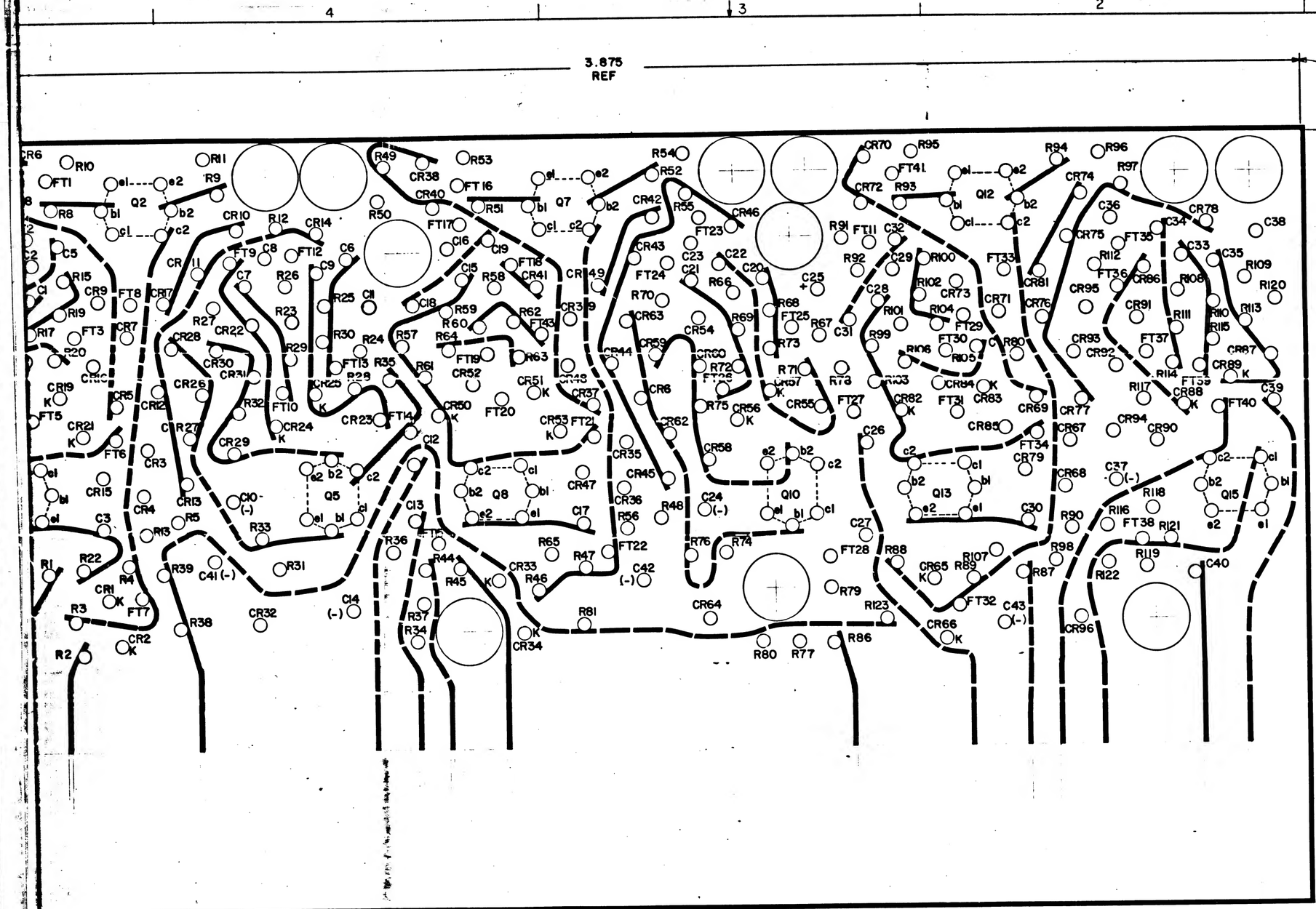
.035 DIA
.040
350 HOLES

1008119
TOP

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIMLINE

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± ± ±
		DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTE 2
1007086		HEAT TREATMENT
NEXT ASSY	USED ON	FINAL FINISH
APPLICATION		

1/-1008119



REFERENCE :
DRAWING NO. 1008118 FOR
PHOTOGRAPHIC MASTER

BOARDS PRESCRIBED BY MIL-D-70327
TYPE 26 TYPE GEE

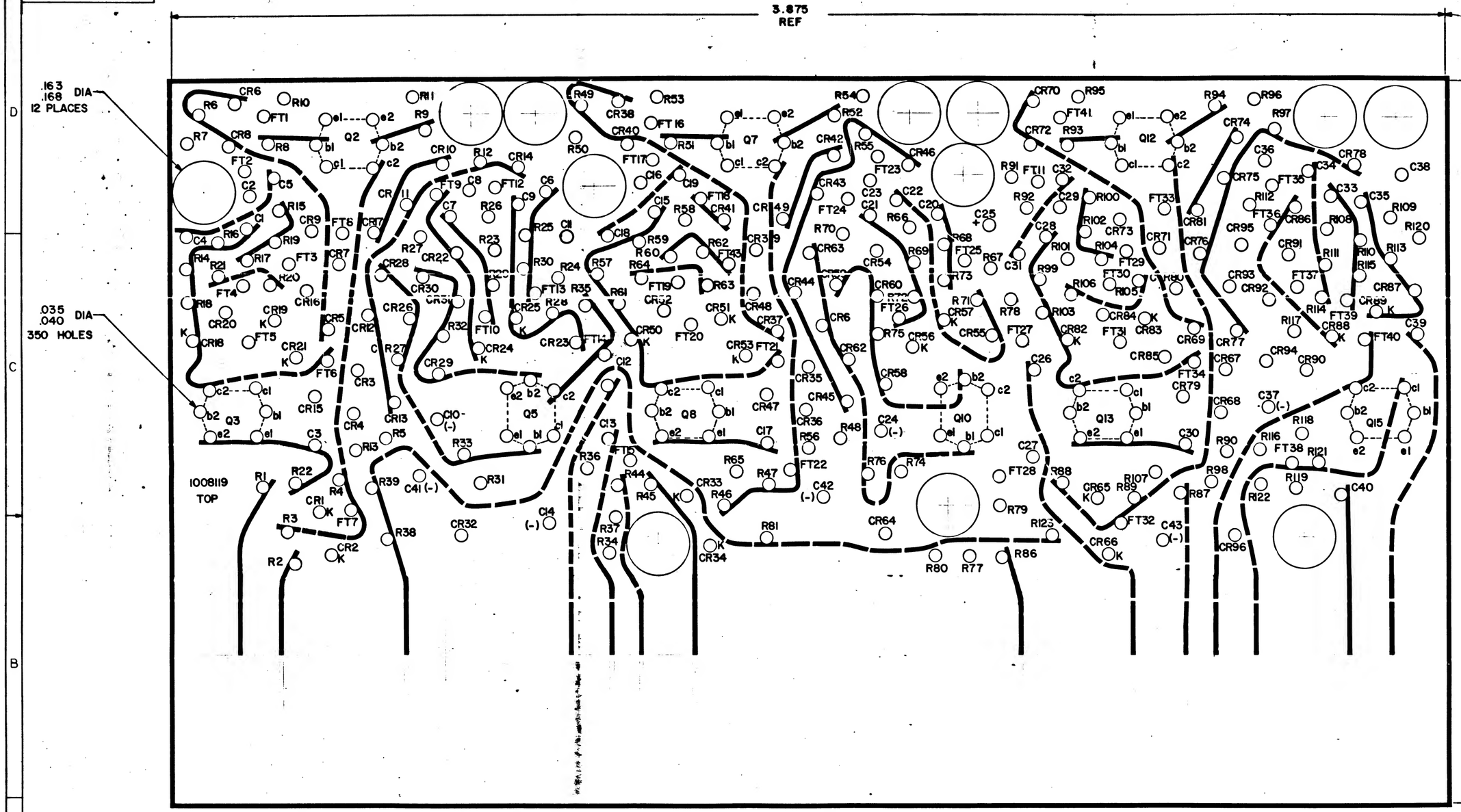
QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge Mass. DWG NO. CONTRACT DRAWN [signature] DATE 12/16/63 CHECKED APPROVAL [signature] 12/16/63 APPROVAL _____ NASA APPROVAL [signature] 12/16/63 MIT APPROVAL [signature] 12/24/63	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		MATERIAL SEE NOTE 2		WIRING BOARD, TOP FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT
1007086		HEAT TREATMENT	CODE IDENT NO	SIZE J / NASA DRAWING NO 1008119
NEXT ASSY	USED ON	FINAL FINISH	SCALE 10/1	WT / SHEET 1 OF 1
APPLICATION				

INCHES
PHOTOGRAPHIC SCALE ONLY

F-2

1008119



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .016 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002138
4. CUT TO WITHIN .010 OF TRIMLINE

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
		TOLERANCES ON
		FRACTIONS ± DECIMALS ± ANGLES ±
		DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTE 2
1007086		HEAT TREATMENT
NEXT ASSY	USED ON	FINISH
APPLICATION		

INCHES
PHOTOGRAPHIC SCALE ONLY

51008119

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR06647		

3.875
REF

1.500
REF

1008121
BOTTOM

C00 ±.005
REF DIM.

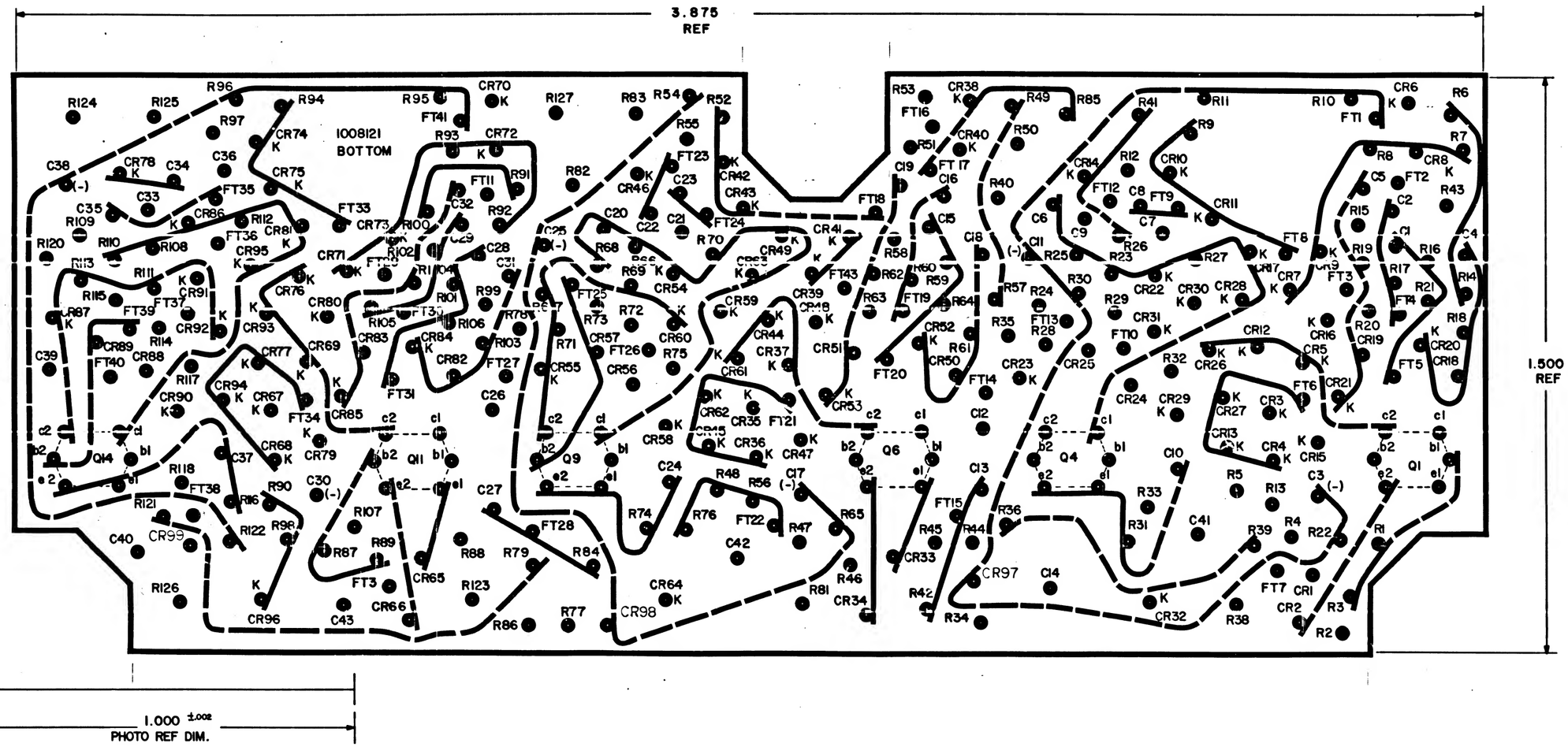
PRESCRIBED BY MIL-D-70327
PROCEDURE OR METHOD
MARKING SHALL NOT
SMD NO
CLASS B, STYLE 1A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±		MIT INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DO NOT SCALE THIS DRAWING		DRAWN G. Bergeron DATE 4/24/64	PHOTOGRAPHIC MASTER WIRING BOARD, BOTTOM FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT
MATERIAL SEE NOTE 5		CHECKED	
HEAT TREATMENT		APPROVAL A. A. Scott 4/24/64	
FINAL FINISH		APPROVAL	
NEXT ASSY	USED ON	NASA APPROVAL	CODE IDENT NO.
APPLICATION		MIT APPROVAL W. Hopkins 4/24/64	SIZE J
		SCALE 10/1	WT
			NASA DRAWING NO. 1008120
			SHEET 1 OF 1

INCHES
0 1
PHOTOGRAPHIC SCALE ONLY

1008120 A



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .008/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE IA

1008120

QTY REQD	PART OR IDENTIFYING NO.	
		LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 5
HEAT TREATMENT
FINISH

NEXT ASSY | USED ON
APPLICATION

M.I.T. INSTRUMENTATION LAB
Cambridge, Mass.
DRAWN G.B. DATE 6/28/63
CHECKED
APPROVAL R.A. Frost 7-1-63
APPROVAL
NASA APPROVAL
MIT APPROVAL

MARK

PHOTO
WIRING
FORMA
AND

C.E. DRWG NO. 1 1008

SIZE 10/71

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS TO ECR 08134
NO. | DESCRIPTION | DATE | APPROVAL

3.875 REF

1.500 REF

1008121 BOTTOM

1.000 ±.002 PHOTO REF DIM.

STANDARDS PRESCRIBED BY MIL-D-70827
MADE BY PROCESS OR METHOD
MANUFACTURING VARIATIONS SHALL NOT

DIMENSIONS SHOWN
MIL-P-50, TYPE IB, CLASS 2, STYLE IA

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 5
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB, Cambridge, Mass.
MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN G. Bergeron DATE 2/24/63
CHECKED
APPROVAL R. A. Stark 2/24/63
APPROVAL

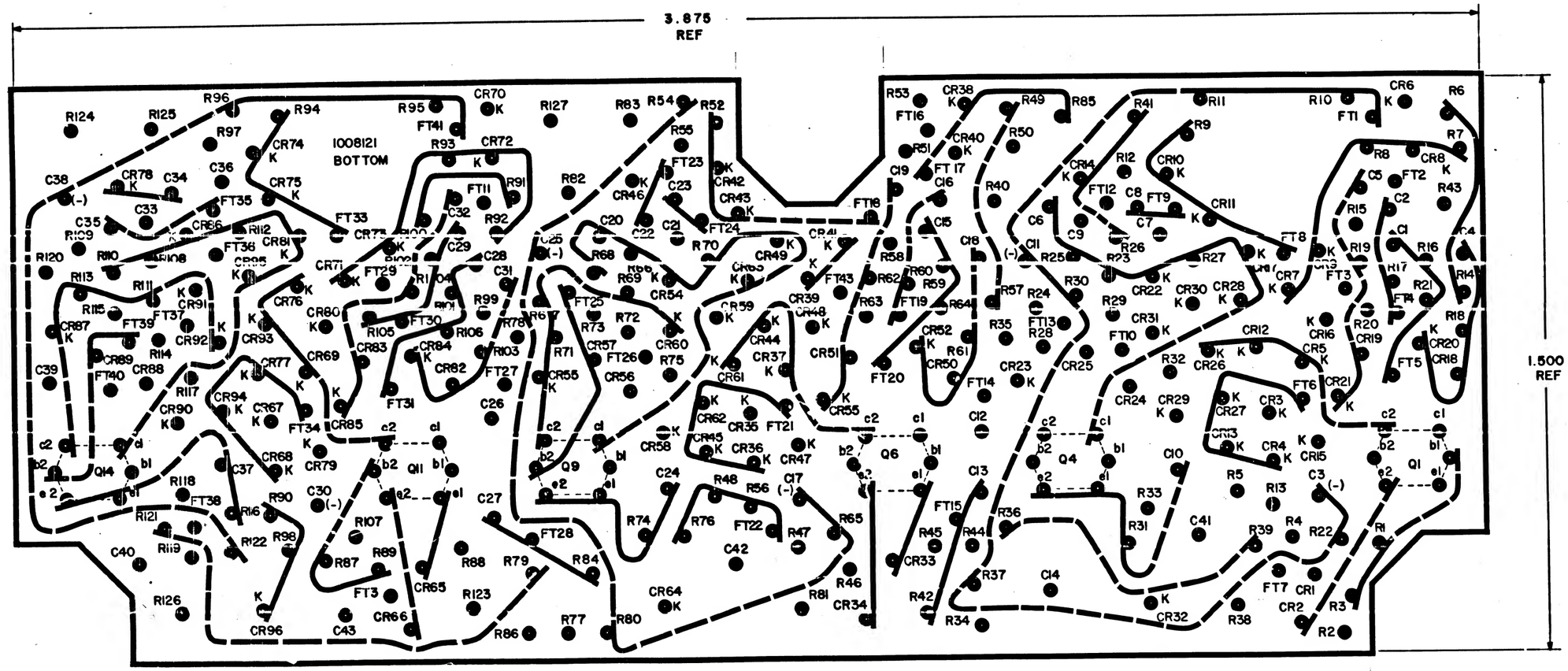
PHOTOGRAPHIC MASTER
WIRING BOARD, BOTTOM
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

NASA APPROVAL
MIT APPROVAL W. Hyde 2/26/63

CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008120
SCALE 10/1 | WT | SHEET 1 OF 1

INCHES
PHOTOGRAPHIC SCALE ONLY

1008120



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE 1A

		UNLESS OTHERWISE SPECIFIED
		DIMENSIONS ARE IN INCHES
		TOLERANCES ON
		FRACTIONS DECIMALS ANGLES
		DO NOT SCALE THIS DRAWING
		MATERIAL: SEE NOTE 3
		HEAT TREAT
NEXT ASSY	USED ON	FINISH
APPLICATION		

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS # TDRR 07-14			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06646	2-15-67	

1218001

3.875
REF

TRIM LINE SEE NOTE 4

1.500
REF

1008121
BOTTOM

.035
.040 DIA
344 HOLES

REFERENCE:
DWG NO. 1008120 FOR PHOTOGRAPHIC MASTER

DESCRIBED BY MIL-P-70827
PE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007096		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL SEE NOTE 2 HEAT TREATMENT FINISH PRINT	M I T INSTRUMENTATION LAB Cambridge, Mass. DRAWN CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
NEXT ASSY	USED ON		MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION			WIRING BOARD, BOTTOM FORWARD BACKWARD COUNTER AND COMPUTER OUTPUT
			CODE IDENT NO. SIZE J NASA DRAWING NO. 1008121
			SCALE 10/1 WT SHEET 1 OF 1

1008121 A

1008121

INCHES
PHOTOGRAPHIC SCALE ONLY

F52

1218001

	A	REVISED

3.875
REF

TRIM LINE SEE NOTE 4

1.500
REF

1008121
BOTTOM

.035
.040 DIA
344 HOLES

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL-.062 THICK GLASS EPOXY PER NO 1002155 TYPE GEE -
3. PREPARE BOARD FOR PHOTOGRAPHY PER NO 1002133
4. CUT TO WITHIN .010 OF TRIMLINE

REFERENCE:
DWG NO. 1008120 FOR MASTER

QTY REQD	PART OR IDENTIFYING NO.
	LIST OF MATE

		UNLESS OTHERWISE SPECIFIED	M I T INSTRUMENTATION LAB. Cambridge, Mass.
		DIMENSIONS ARE IN INCHES	DES. BY
		TOLERANCES ON FRACTIONS DECIMALS ANGLES	DRAWN DATE
		DO NOT SCALE THIS DRAWING	CHECKED
		MATERIAL SEE NOTE 2	APPROVAL
		HEAT TREATMENT	APPROVAL
1007086		FINAL FINISH	NASA APPROVAL
NEXT ASSY	USED ON		MIT APPROVAL
APPLICATION			

BA

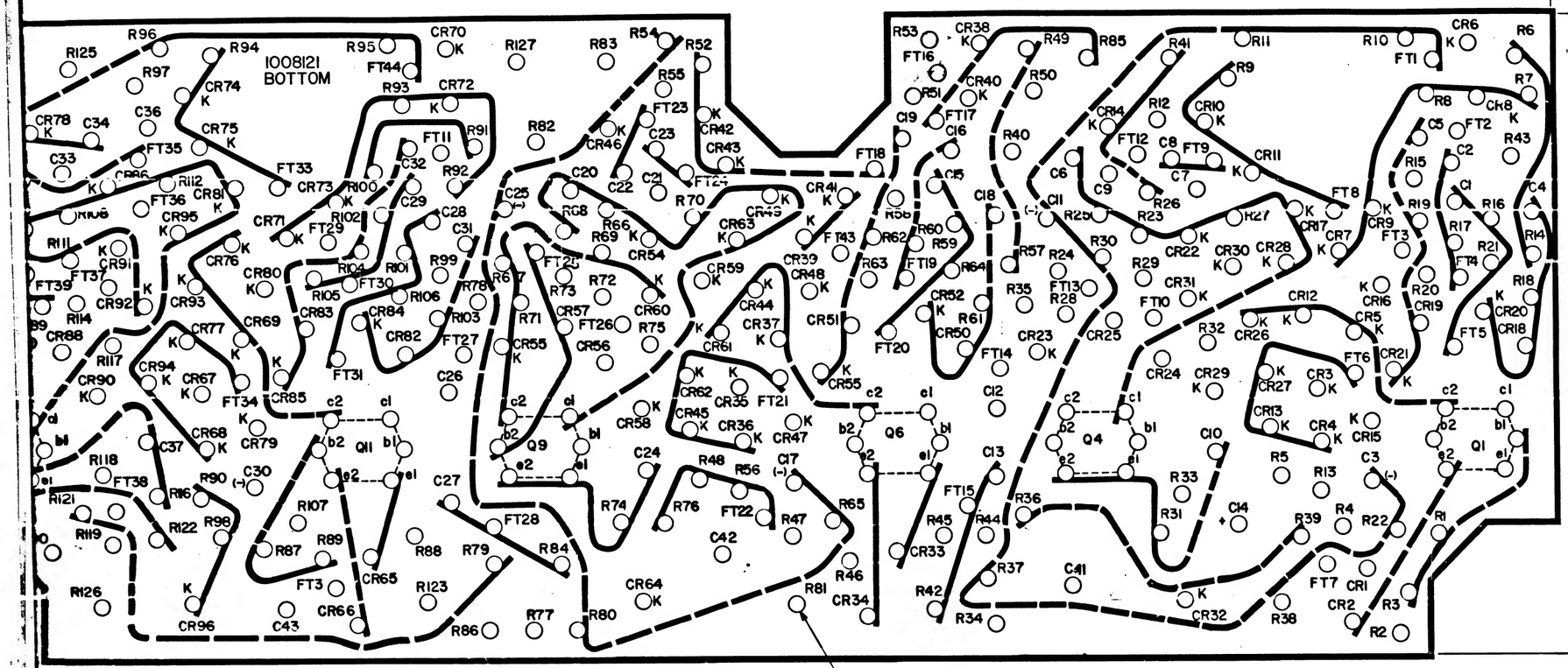
Wi
FORWA
AN

CODE IDENT NO

SCALE 10/1

1006121

INCHES
PHOTOGRAPHIC SCALE ONLY



REFERENCE:
DWG NO. 1008120 FOR PHOTOGRAPHIC MASTER

PRESCRIBED BY MIL-D-70327
TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007086			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

INSTRUMENTATION LAB
CAMBRIDGE MASS.
DRAWN G. Bergeron DATE 6/28/63
CHECKED
APPROVAL N. R. Feist 7/1/63
APPROVAL
NASA APPROVAL
MIT APPROVAL 7/16/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, BOTTOM
FORWARD BACKWARD COUNTER
AND COMPUTER OUTPUT

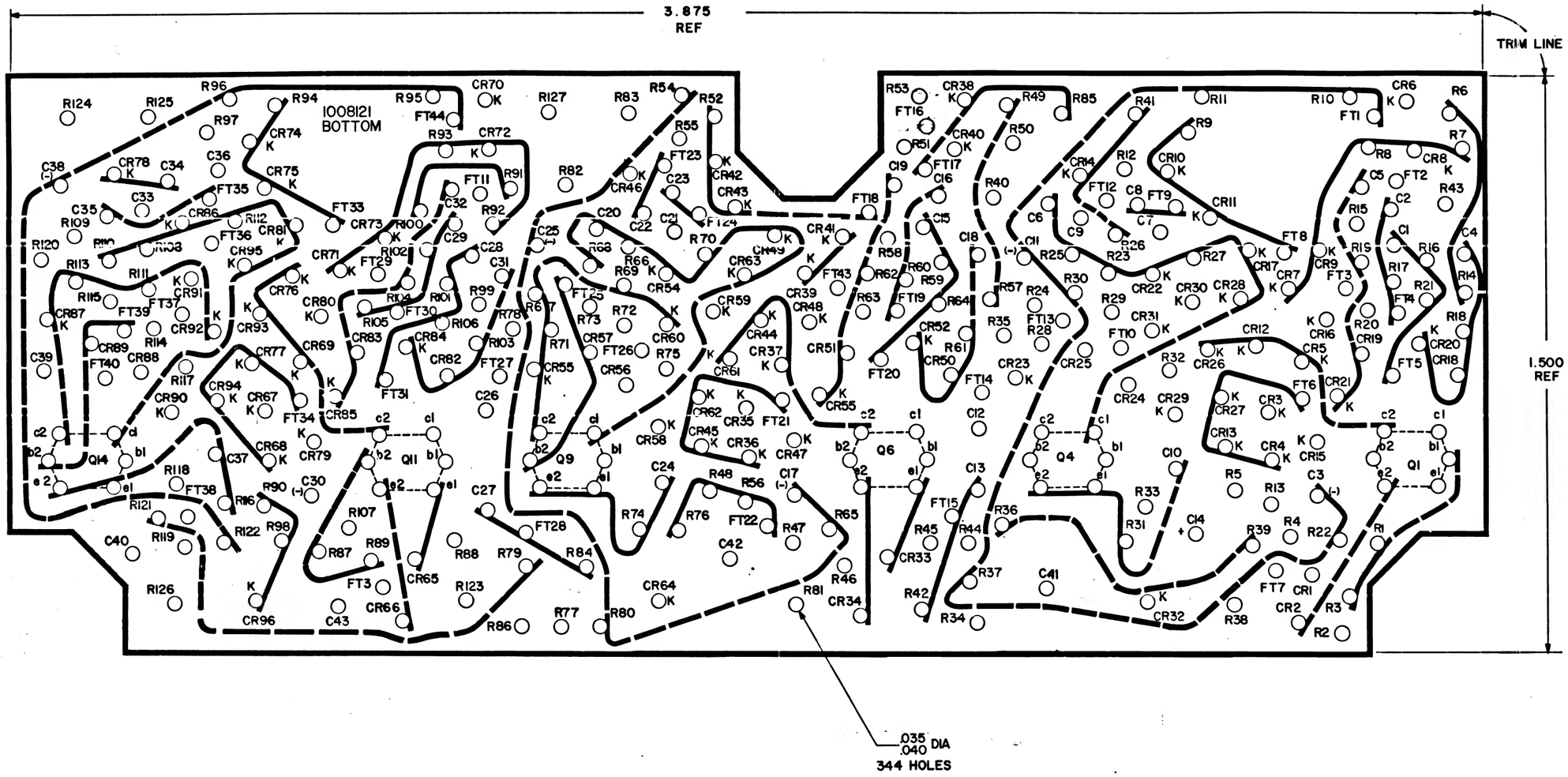
CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008121
SCALE 10/1 | WT | SHEET 1 OF 1

1218001

SYM	REVISIONS & TOPP 07-14 DESCRIPTION	DATE	APPROVAL

1008121

INCHES
PHOTOGRAPHIC SCALE ONLY



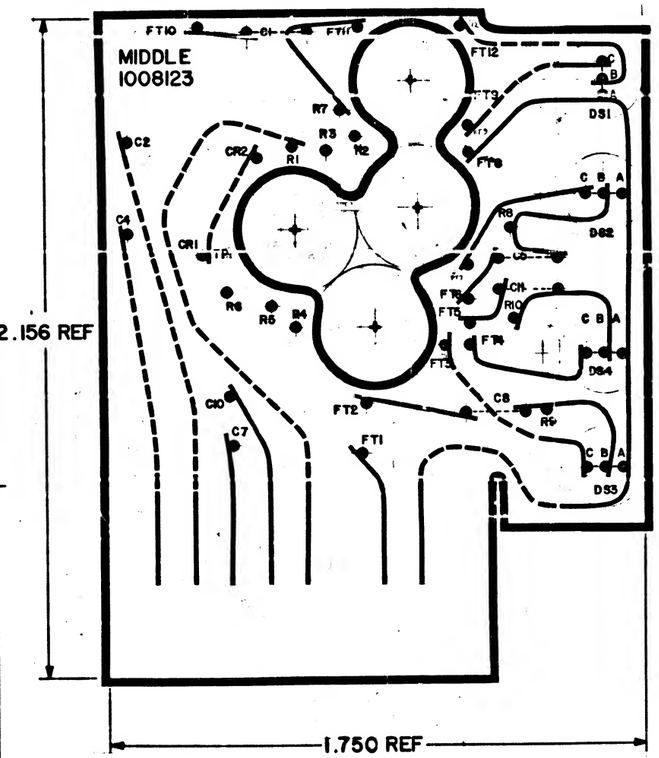
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002135
4. CUT TO WITHIN .010 OF TRIMLINE

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING
		MATERIAL: SEE NOTE 2
1007086		HEAT TREATMENT:
NEXT ASSY	USED ON	FINISH:
APPLICATION		

1008121

INCHES
PHOTOGRAPHIC SCALE ONLY

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL- D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .008/.008 PER L-F-340, TYPE IB, CLASS 2, STYLE IA

REVISIONS TDR 02061

SYM	DESCRIPTION	DATE	APPROVAL

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 4
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN [illegible] DATE 2-1-63
CHECKED [illegible]
APPROVAL [illegible] 2-15-63
APPROVAL
NASA APPROVAL [illegible] 2/19/63
MIT APPROVAL [illegible] 2/19/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD, MIDDLE
LAMPS, BACK UP MODE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008122
SCALE 5:1 | WT | SHEET

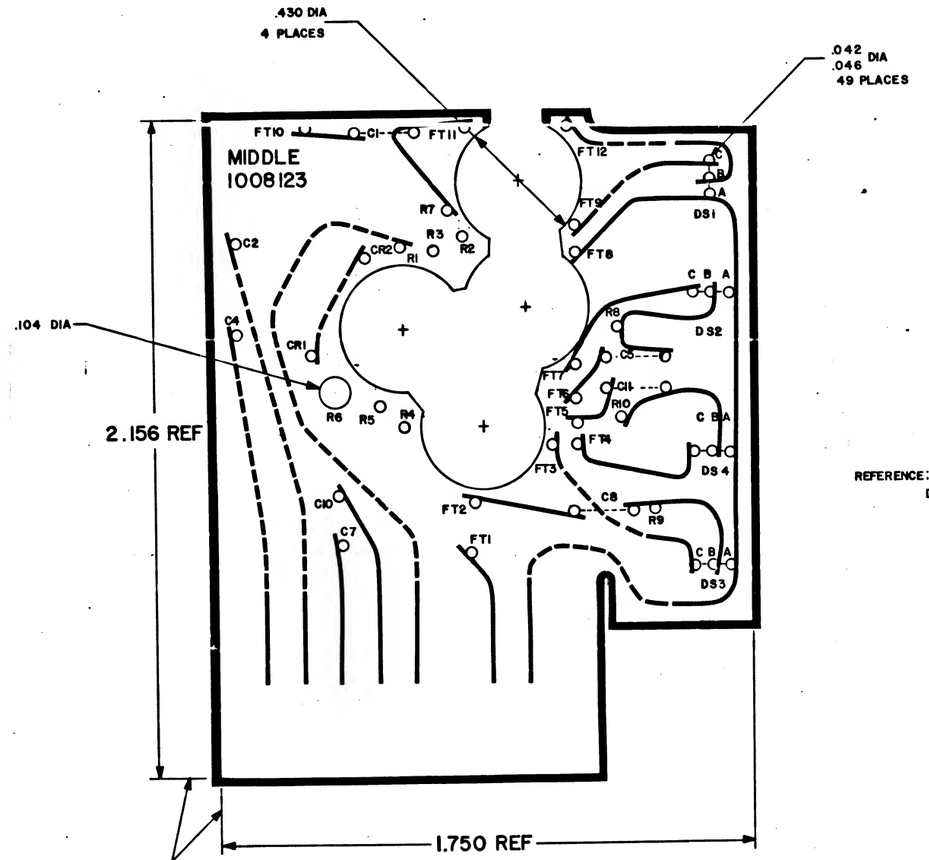
1008122

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

NOTICE: WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO

REVISIONS TDRR 02061			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03779	[illegible]	[illegible]



REFERENCE:
DRAWING NO 1008122 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL- D-70327
2. MATERIAL .010 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007087	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DSIS NO. CONTRACT
DRAWN [illegible] DATE 7-1-63
CHECKED [illegible] 7/15/63
APPROVAL [illegible] 7-15-63
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, MIDDLE
LAMPS, BACK UP MODE

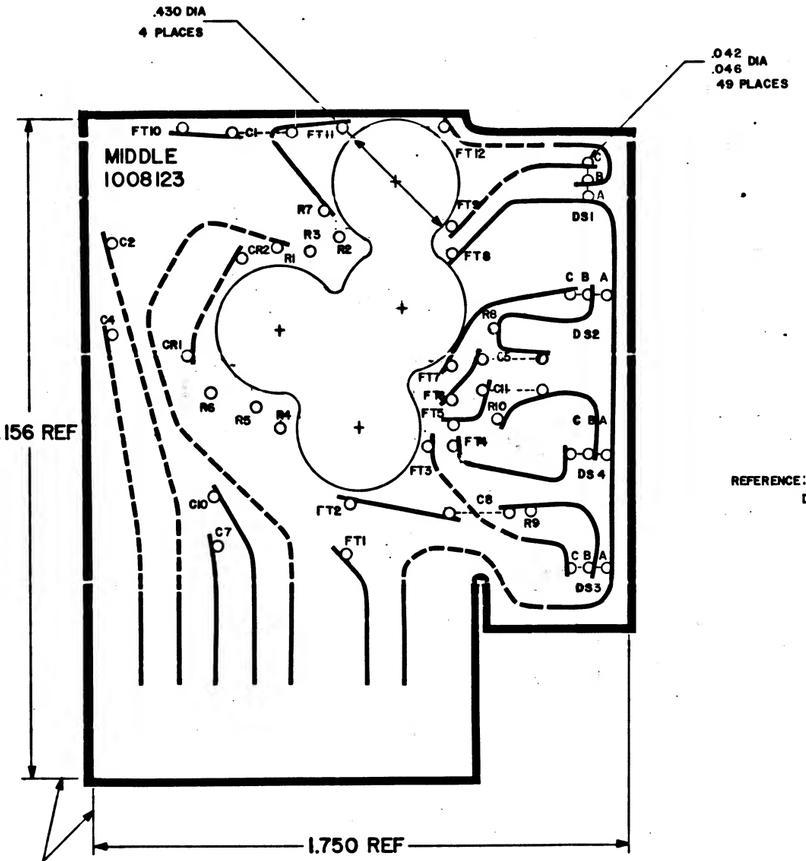
NASA APPROVAL [illegible] 7/17/63
MIT APPROVAL [illegible] 7/16/63

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008123
SCALE 5/1	WT	SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TO 02061			
SYM	DESCRIPTION	DATE	APPROVAL



REFERENCE:
DRAWING NO 1008122 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70527
2. MATERIAL .010 THICK GLASS EPOXY PER ND 1002135 TYPE GEB
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007087	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
ENG. NO. CONTRACT

DRAWN A Crawford DATE 7/-63
CHECKED R D Spangler 12Jul63
APPROVAL A A Hurt 7-15-63
APPROVAL
NASA APPROVAL R E Lundin 7/15/63
MIT APPROVAL W Widnall 17 Jul 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, MIDDLE
LAMPS, BACK UP MODE

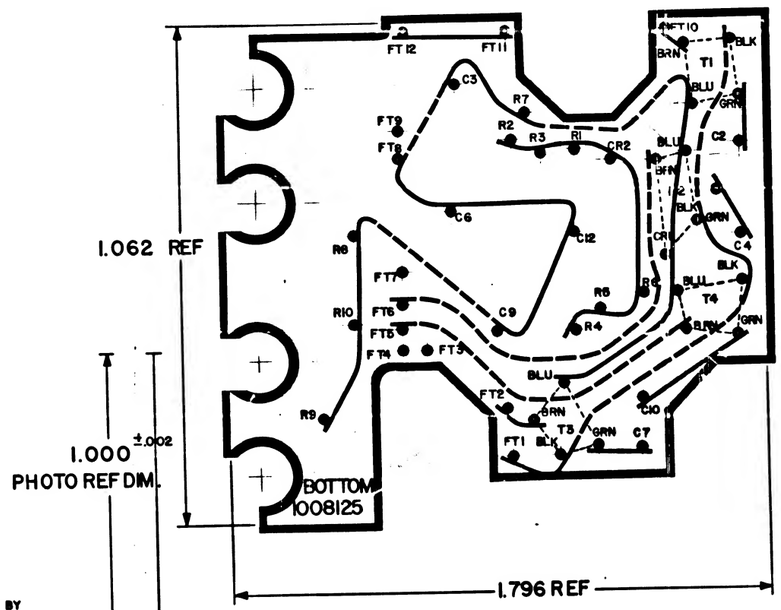
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008123
SCALE 5/1 | WT | SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008123

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 02061			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03779	2 OCT 67	[illegible]



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN

MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	
DO NOT SCALE THIS DRAWING	
MATERIAL	
HEAT TREATMENT	
FINAL FINISH	
NEXT ASSY	USED ON
APPLICATION	

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN J. Conley DATE 7-2-65
CHECKED [illegible]
APPROVAL D. A. Hoag 7-15-68
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

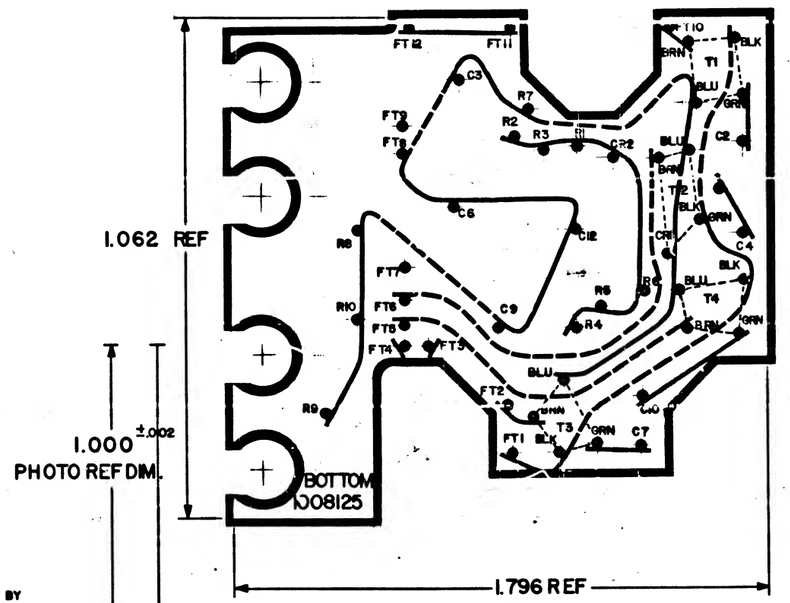
PHOTOGRAPHIC MASTER
WIRING BOARD, BOTTOM
LAMPS, BACK UP MODE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008124
SCALE 5/1 | WT | SHEET 1 OF 1

1008124

NOTICE - WHEN GOVERNMENT DRAWING, SPECIFICATION, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY BE INVOLVED IN ANY WAY OR RELATED THERETO.

REVISIONS TO DR 02061			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE IA

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 4
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN J. Crowley DATE 2-2-65
CHECKED [illegible]
APPROVAL [illegible] 2-16-65
APPROVAL
NASA APPROVAL [illegible] 2/11/65
MIT APPR. [illegible] 2/11/65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD, BOTTOM
LAMPS, BACK UP MODE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008124
SCALE 5/1 | WT | SHEET 1 OF 1

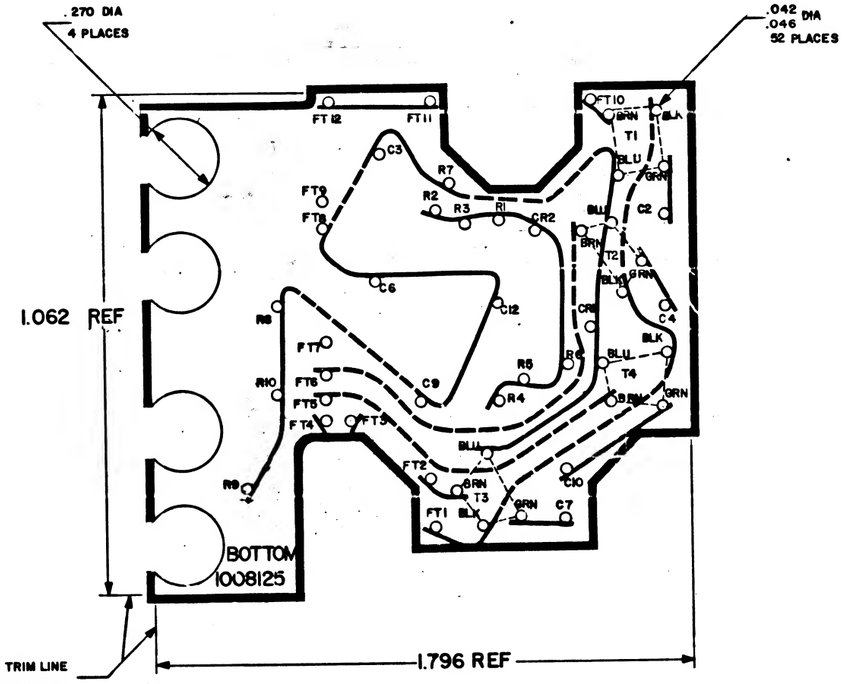
MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008124

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TORR 02061			
SYM	DESCRIPTION	DATE	APPROVAL



REFERENCE:
DRAWING 1008124. FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL .010 THICK GLASS EPOXY PER ND 1002136 TYPE GEB
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
		DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTE 2
1007084		HEAT TREATMENT
NEXT ASSY	USED ON	FINAL FINISH
APPLICATION		

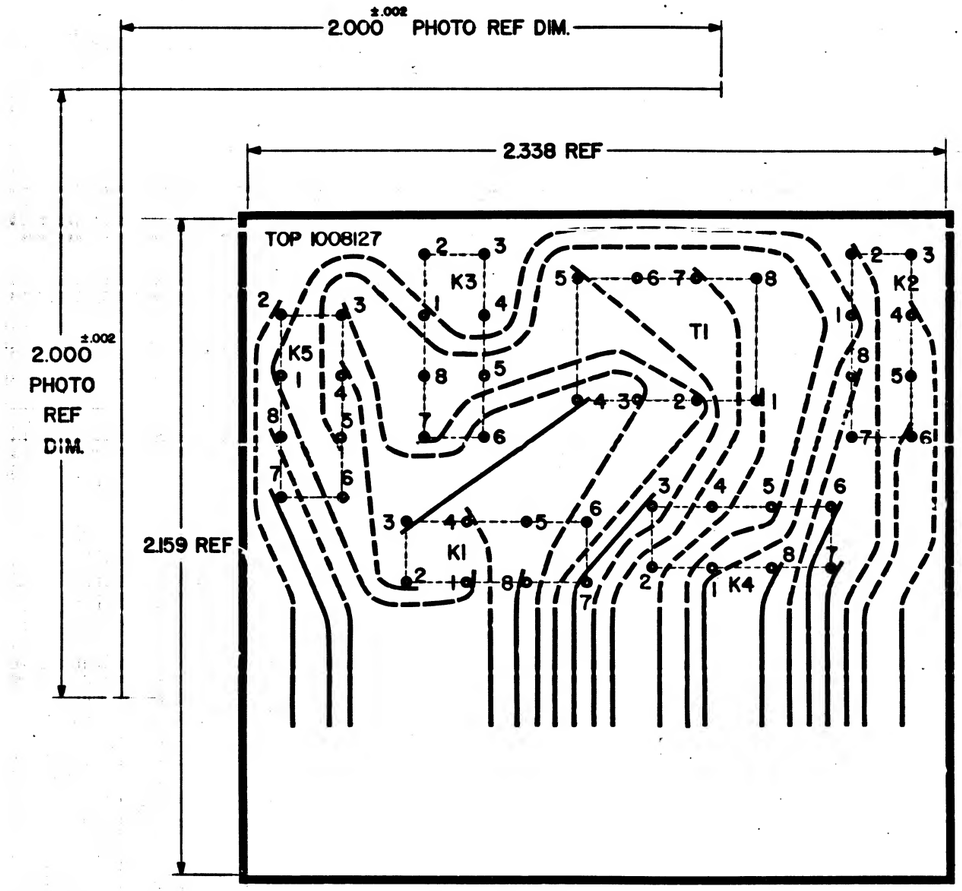
M I T INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN [illegible] DATE 2-2-63	WIRING BOARD, BOTTOM LAMPS, BACK UP MODE
CHECKED [illegible] DATE 7 Jun 63	
APPROVAL [illegible] DATE 7-15-63	
APPROVAL	
NASA APPROVAL [illegible] 7/17/63	CODE IDENT NO. / SIZE D / NASA DRAWING NO. 1008125
MIT APPROVAL [illegible] 7/17/63	SCALE 5/1 / WT / SHEET 1 OF 1

INCHES
PHOTOGRAPHIC SCALE ONLY

1008125

NOTICE - THIS GOVERNMENT DRAWING, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TOR 02068			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: FILM .006/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE 1A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
* * *
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 4
HEAT TREATMENT
FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN R.P. Ramey DATE 2 MAR 68
CHECKED E.O.T. 4-12-68
APPROVAL W.A. Tate 15 MAR 68
APPROVAL
NASA APPROVAL W.J. Dunn
MIT APPROVAL E.W. Hall 3/27/68

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD, CDU ZEROING TRANSFORMER, RELAYS AND ENTRY RELAYS

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008126
SCALE 5/1 | WT | SHEET 1 OF 1

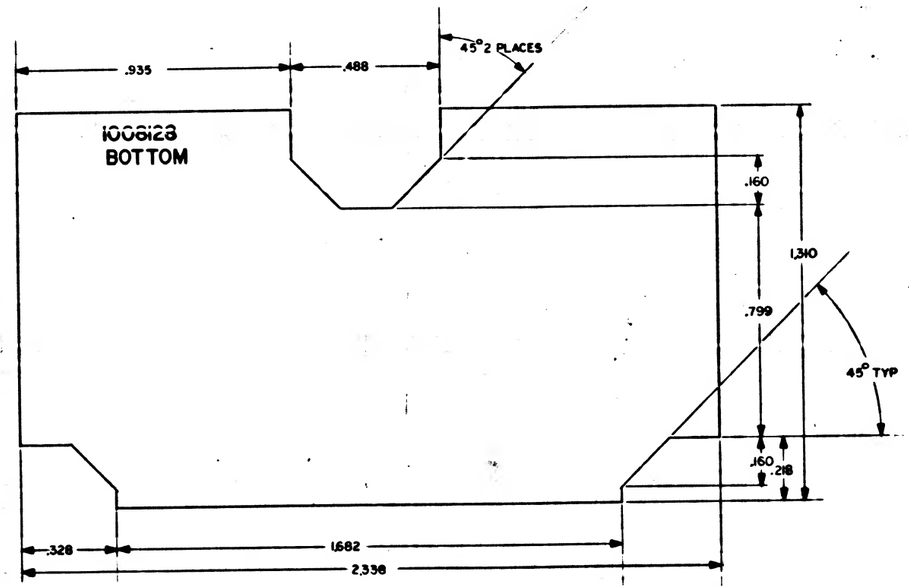
1008126

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TOR 02064			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER NEMA G-10 TYPE GEB

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007067	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± .005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN B. Ramsay DATE 2-14-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WAFER BOARD, BOTTOM
CDU ZEROING TRANSFORMER, RELAYS AND ENTRY RELAYS

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008128
SCALE 5/1 | WT | SHEET 1 OF 1

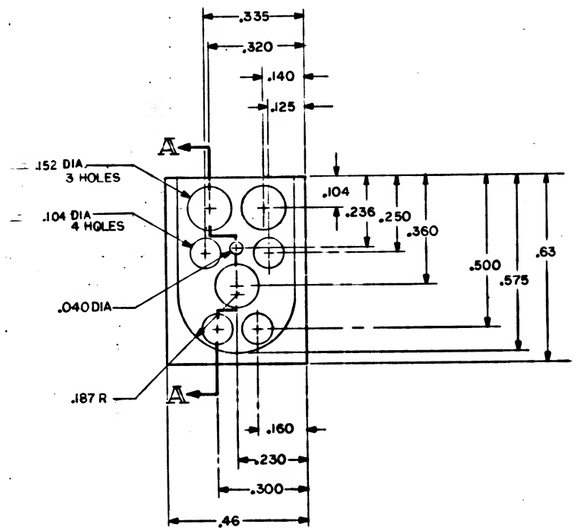
1008128

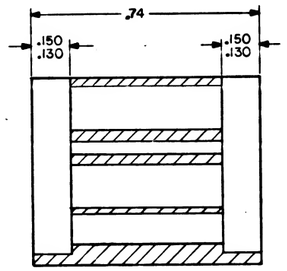
MASTER

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

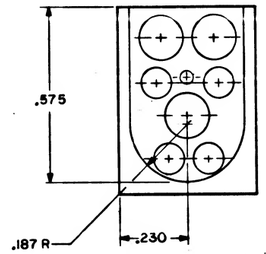
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL





SECTION A-A



FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 02729 DATE 6-21-68

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: NYLON PER MIL P 17091B TYPE II

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 XXX ±.005 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL SEE NOTE 2 HEAT TREATMENT FINAL FINISH	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DWG. NO. CONTRACT DRAWN D. Douglas DATE 6-6-68 CHECKED ESL Lebow 6-21-68 APPROVAL ESL Lebow 6-21-68 APPROVAL W. Hurst 6-21-68 NASA APPROVAL W.D. Lee 6/21/68 MIT APPROVAL W Nagel DRAW
APPLICATION			

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HOUSING MODULE
BUFFER RESISTORS
TRAY NO. 2

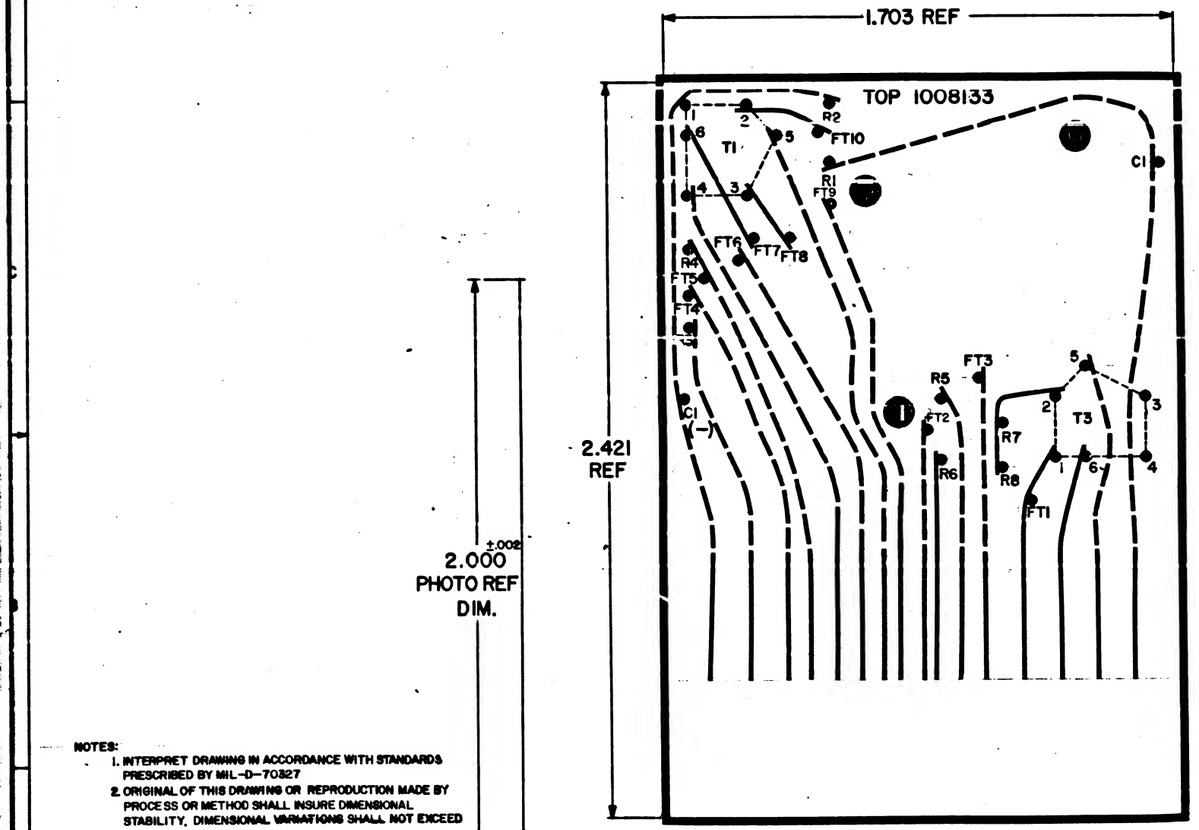
CODE IDENT NO	SIZE	NASA DRAWING NO.
	D	1008129
SCALE 5/1	WT	SHEET 1 OF 1

1008129

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 02153			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04493	4-5-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY, DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER FOOT
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: .006 TO .008 THICK PLASTIC SHEET SENSITIZED AND DIMENSIONALLY STABLE PER L-F-340, TYPE IB, CLASS 2, STYLE IA

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 4
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB, Cambridge, Mass.
DWG. NO. | CONTRACT
DRAWN W.E. Tong DATE
CHECKED D. Hoag
APPROVAL D. Hoag 17 Apr 63
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD, TOP
FIXED RESOLUTION
TRANSFORMATION AND ENTRY MODE

NASA APPROVAL Richard J. Hoyle 7/16/63
MIT APPROVAL [illegible] 4/24/63

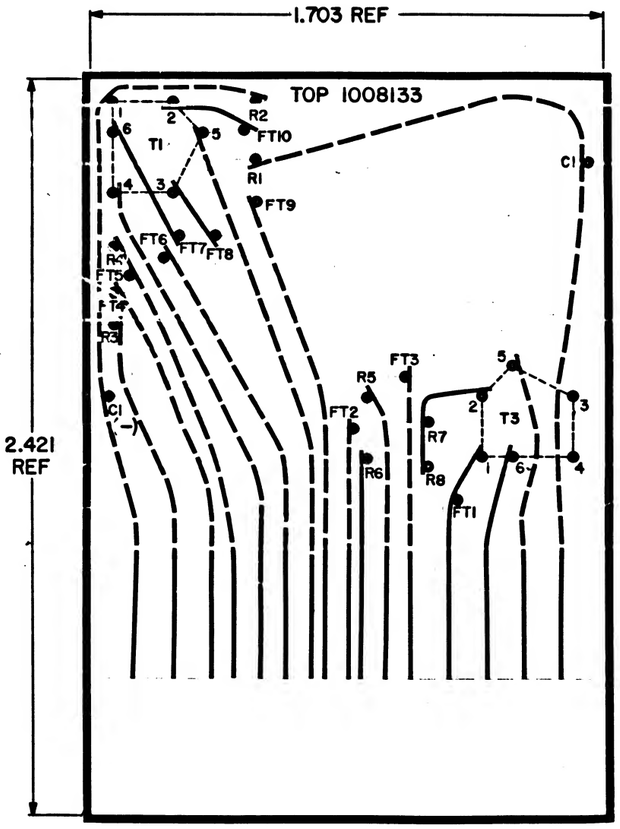
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008131
SCALE 5/1 | WT | SHEET 1 OF 1

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA, IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY BE INVOLVED THEREIN.

REVISIONS TORR 02153

SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY, DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER FOOT
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: .006 TO .008 THICK PLASTIC SHEET SENSITIZED AND DIMENSIONALLY STABLE PER L-F-340, TYPE IB, CLASS 2, STYLE IA

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

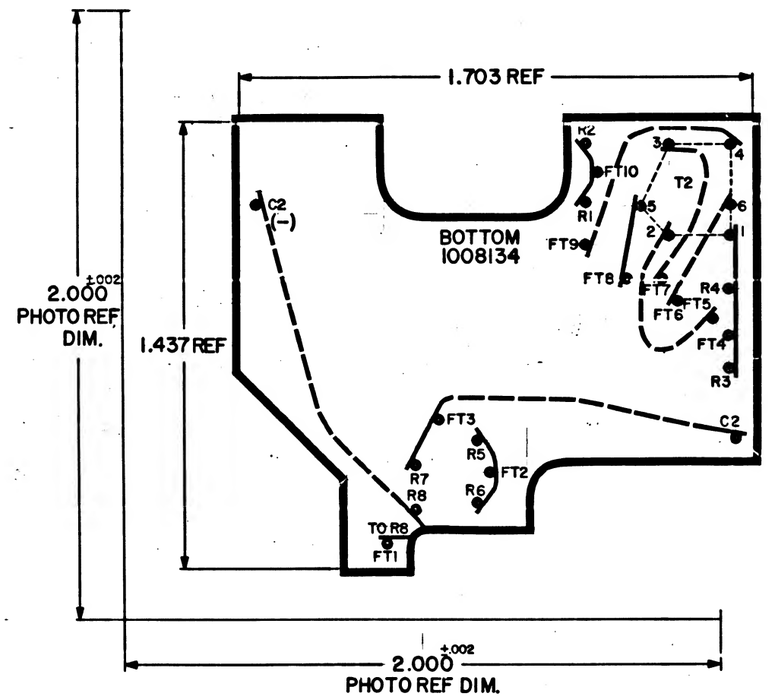
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DEPT. NO. CONTRACT	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DO NOT SCALE THIS DRAWING	DRAWN W.E.Tway DATE	PHOTOGRAPHIC MASTER WIRING BOARD, TOP FIXED RESOLUTION TRANSFORMATION AND ENTRY MODE
MATERIAL SEE NOTE 4	CHECKED L. Hyatt	
HEAT TREATMENT	APPROVAL D.E.Hagerman 7-25	
FINAL FINISH	APPROVAL	
NEXT ASSY / USED ON / APPLICATION	NASA APPROVAL [illegible] 7/24/13	CODE IDENT NO. / SIZE D / NASA DRAWING NO. 1008131
	MIT APPROVAL [illegible]	SCALE 5/1 / WT / SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008131

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 0215			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL VARIATIONS SHALL NOT EXCEED .001 INCH PER FOOT
3. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
4. MATERIAL: .006 TO .008 THICK PLASTIC SHEET SENSITIZED AND DIMENSIONALLY STABLE PER L-F-340, TYPE IB, CLASS 2 STYLE IA

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

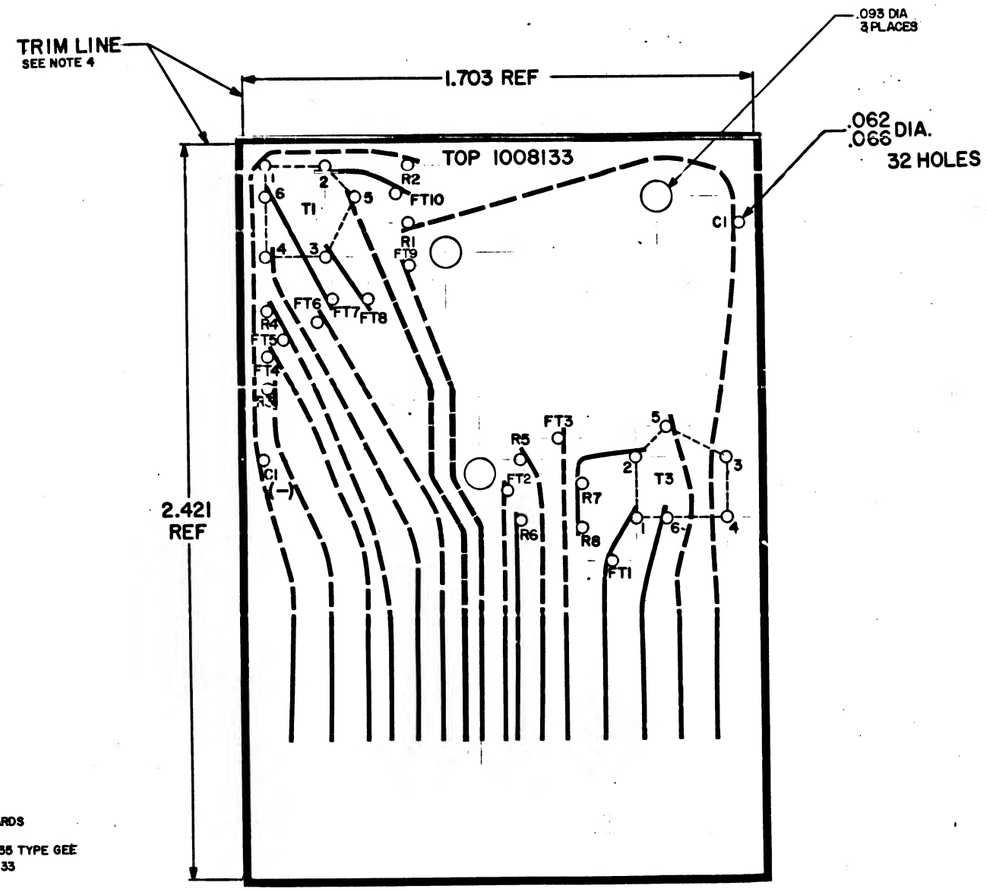
NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINAL FINISH	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DWG. NO. CONTRACT DRAWN W.E.Feay DATE 12/13/63 CHECKED J.E.Hawkins APPROVAL E.C.Hall 12/16/63 APPROVAL NASA APPROVAL 12/19/63 MIT APPROVAL 12/19/63
APPLICATION			MANNED SPACECRAFT CENTER HOUSTON, TEXAS
			PHOTOGRAPHIC MASTER WIRING BOARD BOTTOM FIXED RESOLUTION TRANSFORMATION AND ENTRY MODE
			CODE IDENT NO. - SIZE D NASA DRAWING NO. 1008132
			SCALE 5/1 WT SHEET 1 OF 1

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008132

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS FOR: S-3			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04493	11-5-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THK. GLASS EPOXY PER ND1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIMLINE

REFERENCE:
DRAWING NO. 1008131 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007078	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES °
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DWG. NO. CONTRACT
DRAWN W.E. Tuck DATE
CHECKED [illegible]
APPROVAL [illegible] 7-20-63
APPROVAL
NASA APPROVAL [illegible] 7/19/63
MIT APPROVAL [illegible] 7/24/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

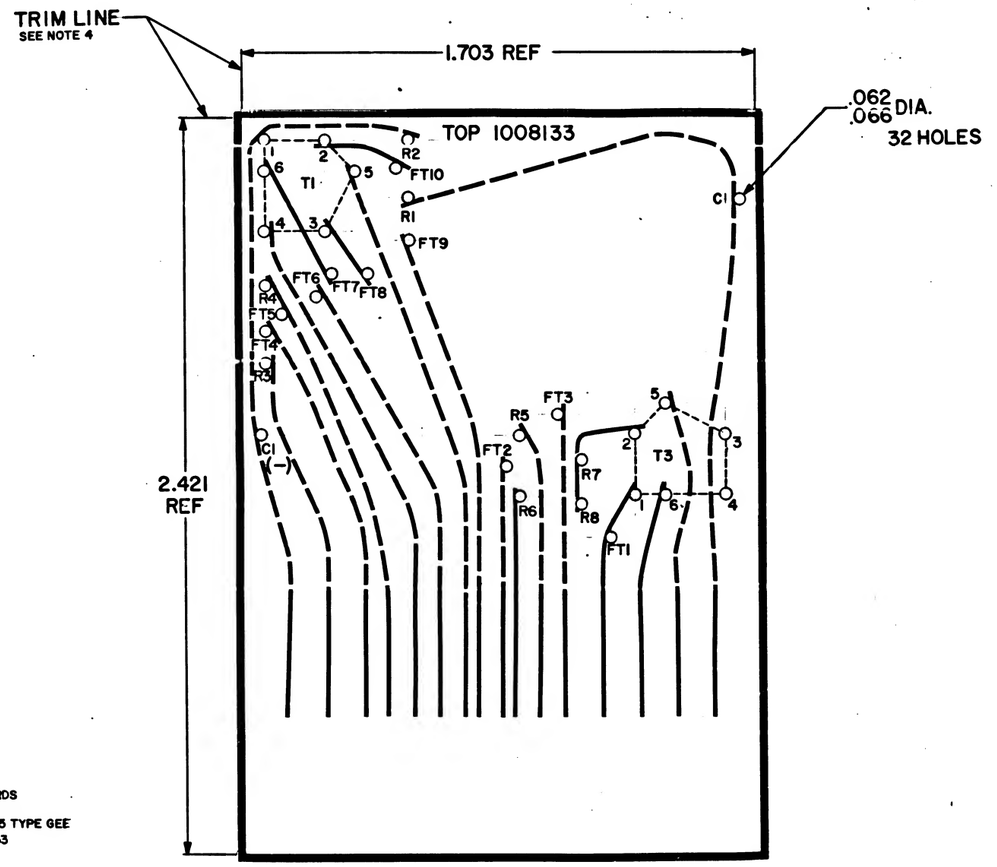
WIRING BOARD, TOP
FIXED RESOLUTION
TRANSFORMATION AND ENTRY MODE

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008133
SCALE 5/1 | WT | SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS PORC 0715-3			
SYM	DESCRIPTION	DATE	APPROVAL



REFERENCE:
DRAWING NO. 1008131 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THK. GLASS EPOXY PER ND1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND1002133
4. CUT TO WITHIN .010 OF TRIMLINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007078		HEAT TREATMENT	
NEXT ASSY	USED ON	FINAL FINISH	
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS.
DWG NO CONTRACT

DRAWN W.F. Tracy DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, TOP
FIXED RESOLUTION
TRANSFORMATION AND ENTRY MODE

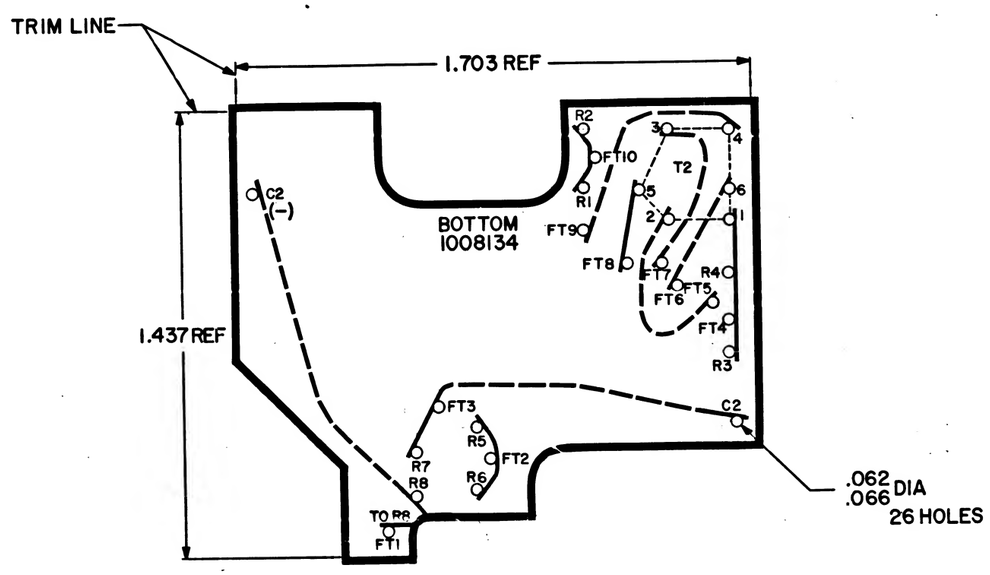
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008133
SCALE 5/1	WT	SHEET 1 OF 1

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

1008133

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS FOR 07.52			
SYM	DESCRIPTION	DATE	APPROVAL



REFERENCE:
DRAWING NO. 1008132 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .015 THICK GLASS EPOXY PER ND 1002135 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007078	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. CONTRACT
DRAWN D.E. Long DATE 7/12/63
CHECKED L. Martin
APPROVAL [illegible] 9-24-63
APPROVAL
NASA APPROVAL [illegible] 7/24
MIT APPROVAL [illegible] 9-24-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

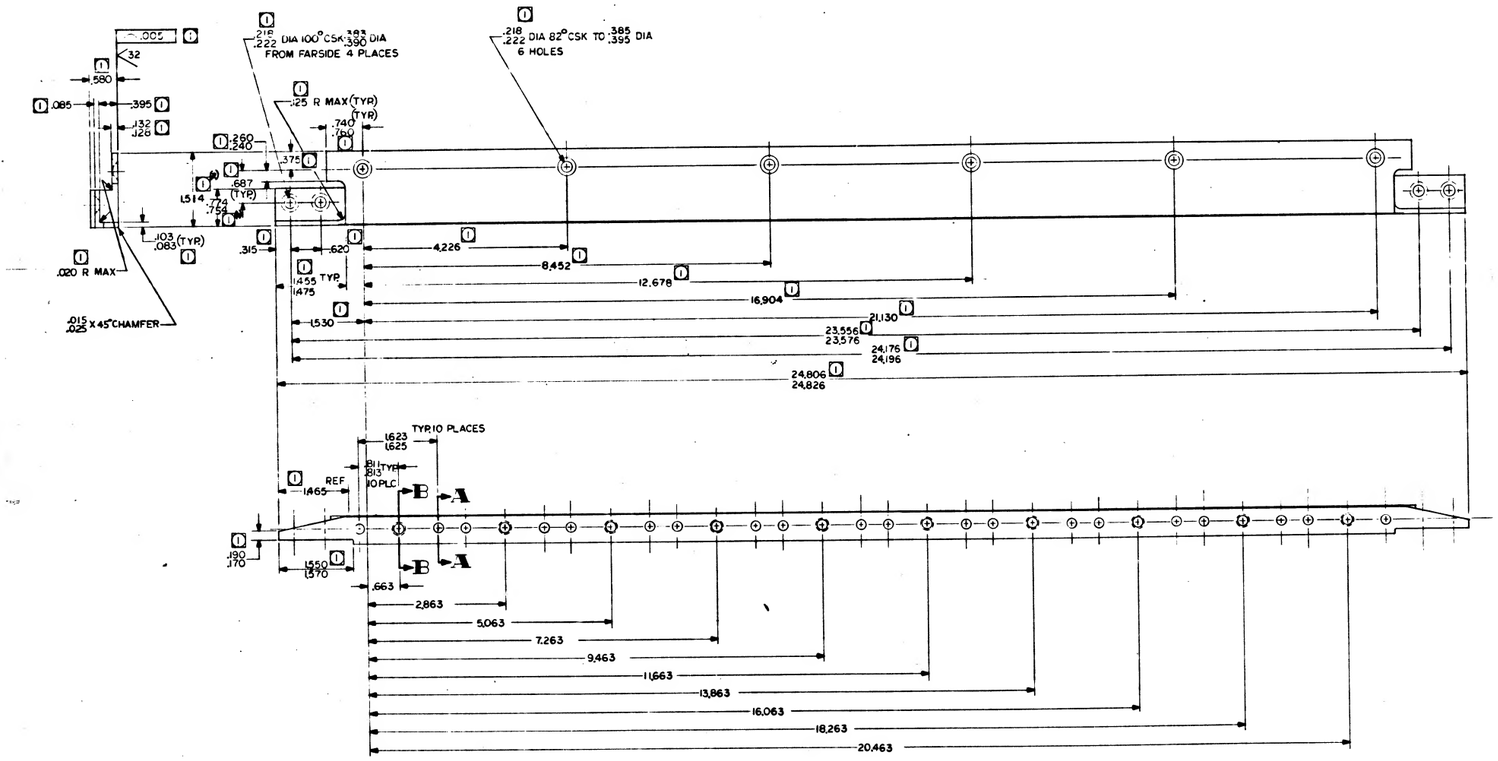
WIRING BOARD, BOTTOM
FIXED RESOLUTION
TRANSFORMATION AND ENTRY MODE

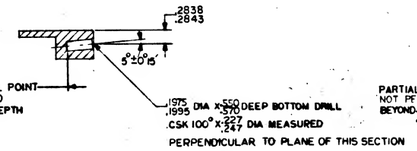
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008134
SCALE 5/1 | WT | SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

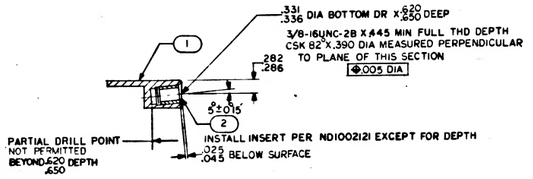
1008134

REVISIONS TDRR 02137			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03643		





SECTION A-A
(TYR)



SECTION B-B
(TYR)

NOTES

1. 63 ALL OVER UNLESS OTHERWISE SPECIFIED
2. BREAK SHARP EDGES .005-.015 R
3. MATERIAL: 416 SST PER QQ-A-763 CONDITION A (1)
   FINISH: PASSIVATE PER MIL-F-14072 (1)

(1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003

(2) MAX. ICD ENVELOPE DIMENSIONS ARE .560 AND .810 RESPECTIVELY. ACTUAL VALUES MAY BE LESS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	
10	NAS1394CA-4L	INSERT, SCREW, LOCKING	2
1	1008135	TOE CAP	1

1007100	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±
DECIMALS .XXX ±.005, XX ±.02
ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 3
HEAT TREATMENT
FINISH SEE NOTE 3

MIT INSTRUMENTATION LAB, Cambridge, Mass.
DRAWN [illegible] DATE 2-20-63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TOE CAP
POWER & SERVO ASSY

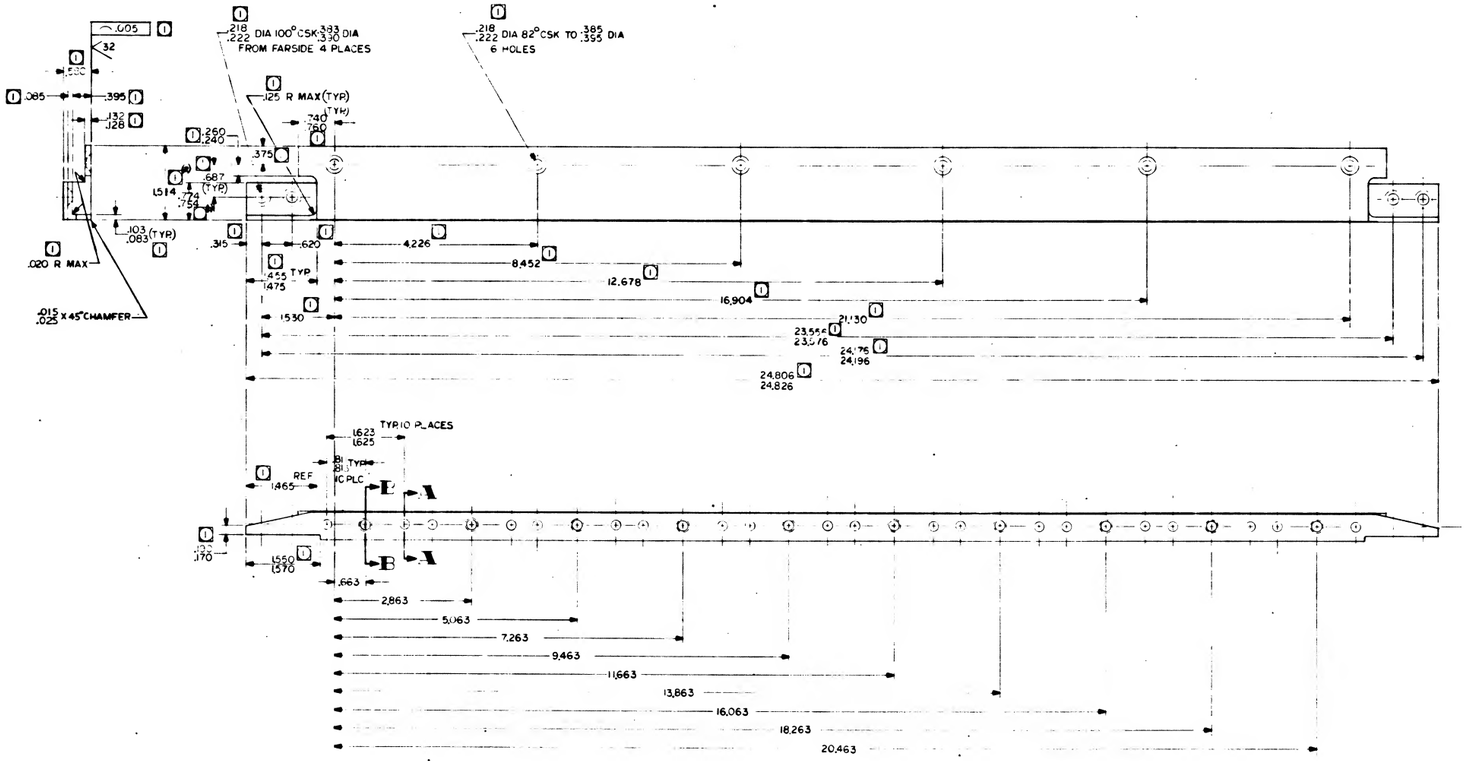
CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008135
SCALE 1/1 | WT | SHEET 1 OF 1

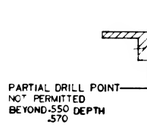
1008135 A

MASTER

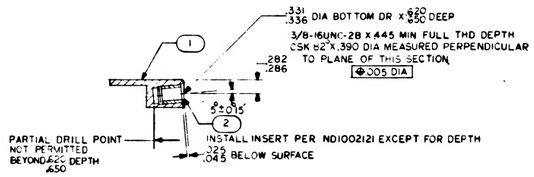
INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

REVISIONS TDR-0227			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 03647		
B	REVISED PER TDRR 3095	7/6/67	





SECTION A A
(TYP)



SECTION B B
(TYP)

NOTES
1. 63 ALL OVER UNLESS OTHERWISE SPECIFIED
2. BREAK SHARP EDGES .005-.015 R
3. MATERIAL: 416 SST PER QQ-A-763 CONDITION A (1)
   FINISH: PASSIVATE PER MIL-F-14072 (1)

(1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003

(2) .810 .820 MAX. CD ENVELOPE DIMENSIONS ARE .560 AND .810 RESPECTIVELY. ACTUAL VALUES MAY BE LESS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
10	NAS1394CA-4L	INSERT, SCREW, LOCKING	2
1	1008135	TOE CAP	1

LIST OF MATERIALS

1007100		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .X ±.005 .XX ±.02 ANGLES ±1° DO NOT SCALE THIS DRAWING	MATERIAL SEE NOTE 3
NEXT ASSY	USED ON		HEAT TREATMENT
APPLICATION			FINISH SEE NOTE 3

M I T INSTRUMENTATION LAB Cambridge Mass.

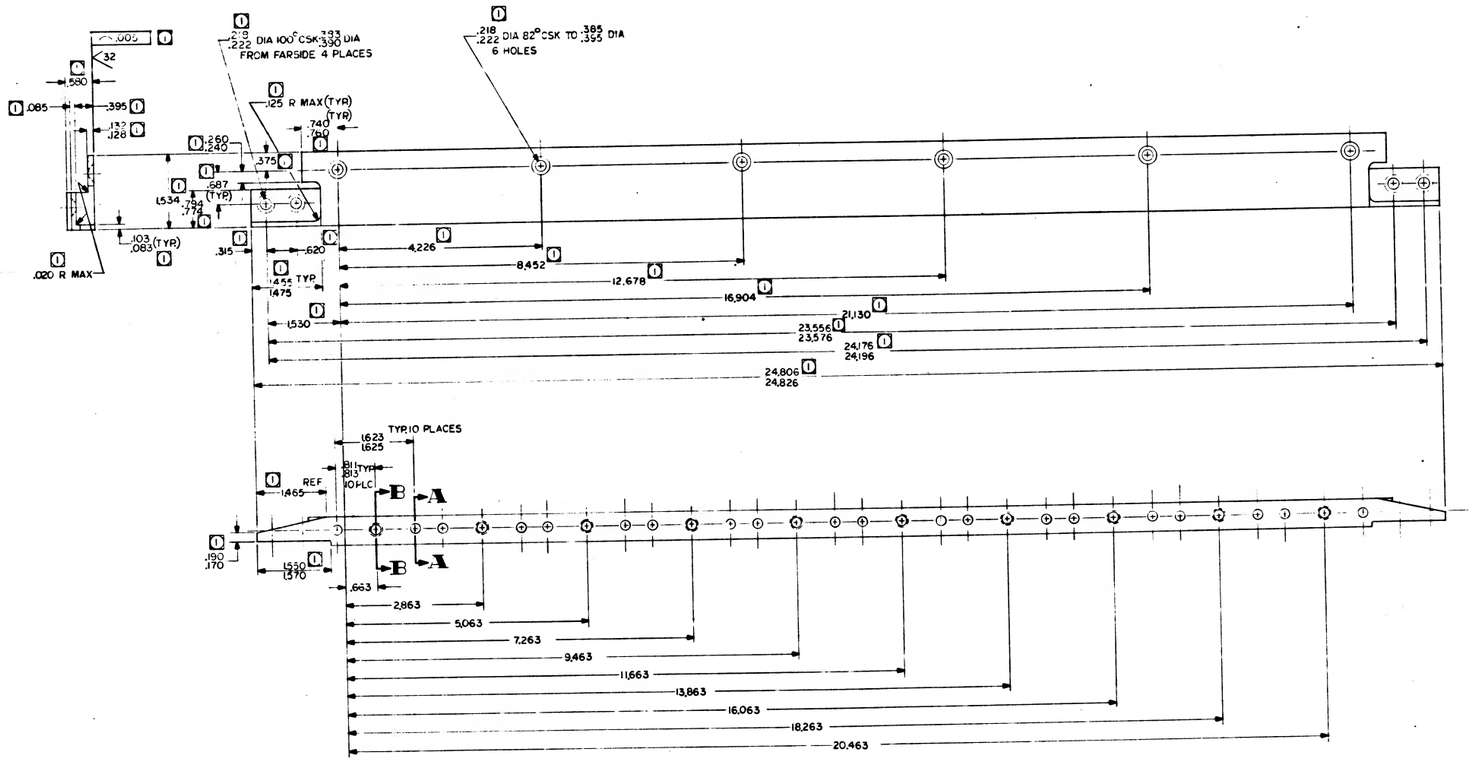
DRAWN [illegible] DATE 2-20-63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 5/16/67
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TOE CAP
POWER & SERVO ASSY

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008135
SCALE 1/1 | WT | SHEET 1 OF 1

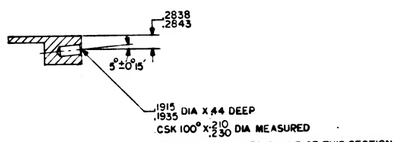
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



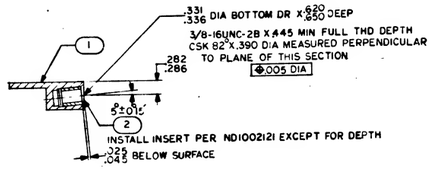
NOTES

1. 63 ALL OVER
2. BREAK SHARP EDGES .005-.015 R
3. MATERIAL: 416 SST PER QQ-A-763 CONDITION A (1)
   FINISH: PASSIVATE PER MIL-F-14072 (1)

(1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003



SECTION A-A
(TYP)



SECTION B-B
(TYP)

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
10	NAS1394CA-4L	INSERT, SCREW, LOCKING	2
1	1008135	TOE CAP	1

LIST OF MATERIALS

1007100	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
.XXX ±.005 ±1°
.XX ±.02
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 3
HEAT TREATMENT
FINAL FINISH
SEE NOTE 3

M I T INSTRUMENTATION LAB Cambridge, Mass.
CONTRACT
DRAWN DATE 7-30-65
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

TOE CAP
POWER & SERVO ASSY

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008135

SCALE 1/1 | WT | SHEET 1 OF 1

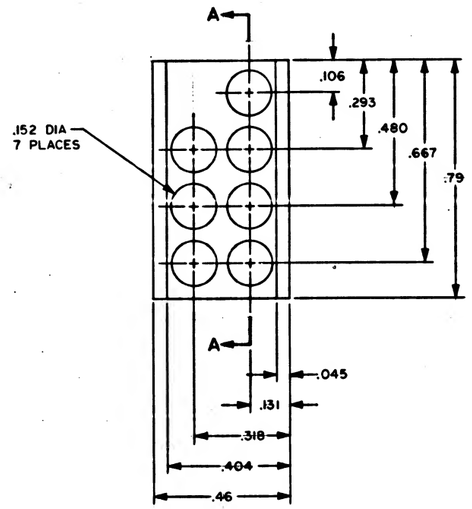
1008135

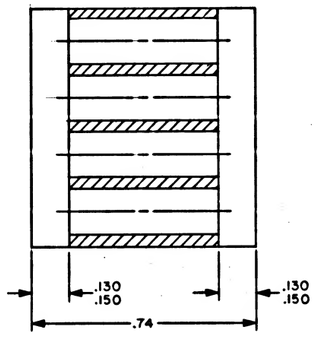
MASTER

INCHES
0
PHOTOGRAPHIC SCALE ONLY

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL





SECTION A-A

FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 02732 DATE 6-21-63

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: NYLON PER MIL-P-17091B TYPE II

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007092	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/64 DECIMALS .XX ± .02 .XXX ± .005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN Tom Healy DATE 4 MAY 63
CHECKED
APPROVAL
APPROVAL 6-21-63
NASA APPROVAL 6/21/63
MIT APPROVAL 6/21/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HOUSING, MODULE
BUFFER RESISTORS
TRAY NO. 7

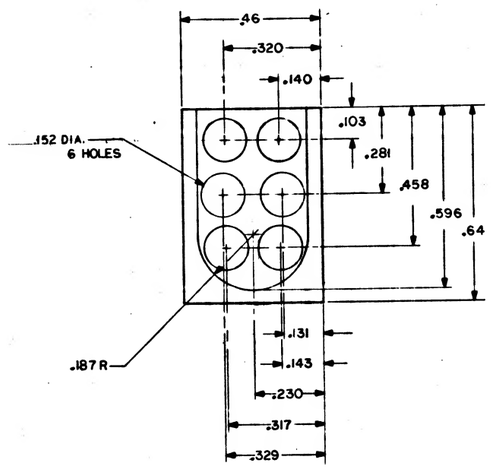
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008136
SCALE 5:1 | WT | SHEET 1 OF 1

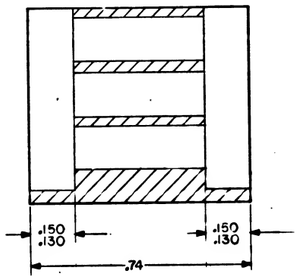
INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

1008136

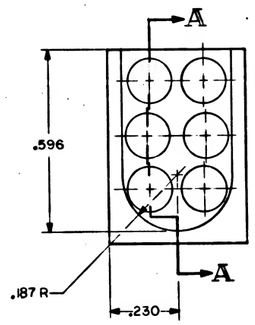
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE USE OR SELL ANY PATENTED INVENTION THAT MAY BE IN ANY WAY RELATED THERETO.

REVISIONS 02729			
SYM	DESCRIPTION	DATE	APPROVAL
A	UPGRDE TO CLASS A PER TDRR 03762	8/23/63	WK





SECTION A-A



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: NYLON PER MIL-P-17091B TYPE II

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ±.02 .XXX .005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN [illegible] DATE 2-4-63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

HOUSING MODULE
BUFFER RESISTORS
TRAY NO.10

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008137

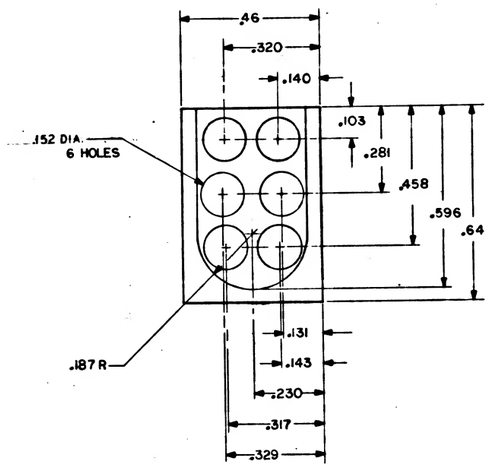
SCALE 5/1 WT SHEET 1 OF 1

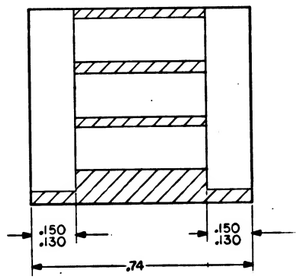
INCHES 0 2 PHOTOGRAPHIC SCALE ONLY

2210001

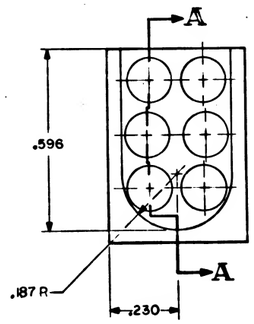
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL





SECTION A-A



FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 02229 DATE 4-24-68

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: NYLON PER MIL-P-17091B TYPE II

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX±.02 .XXX.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN [signature] DATE 8-26-63
CHECKED
APPROVAL
APPROVAL [signature] 8-21-63
NASA APPROVAL [signature] 4/8/1967
MIT APPROVAL [signature] 8/21/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HOUSING MODULE
BUFFER RESISTORS
TRAY NO.10

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008137
SCALE 5/1	WT	SHEET 1 OF 1

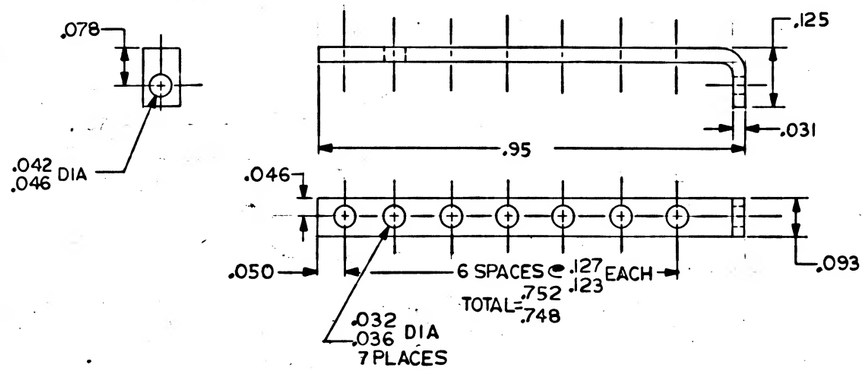
1008137

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008142 A

REVISIONS TDRR 03320			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 08262	2-12-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MATERIAL: COPPER PER QQ-C-504-2

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±.XX ±.02 DECIMALS .XXX .005 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —"—
FINAL FINISH —"—

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN J Crowley DATE 8-29-62
CHECKED
APPROVAL 9-25-62
APPROVAL 9/11/62
NASA APPROVAL 9/4/63
MIT APPROVAL 9/6/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

BUS BAR, SINGLE LUG

CODE IDENT NO.
SIZE C
NASA DRAWING NO. 1008142
SCALE 5:1
WT
SHEET OF

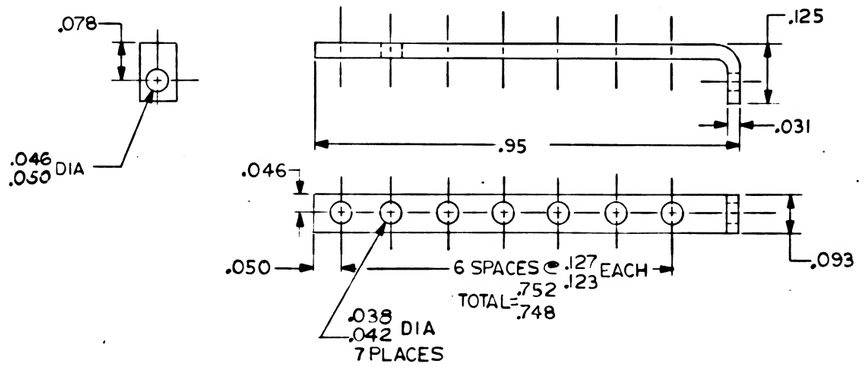
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008142 A

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

B 1008142

REVISIONS TDRR 03320			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 05262	12-18-63	
B	REVISED PER TDRR 18310	2 MAR 65	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MATERIAL: COPPER PER QQ-C-504-2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±.XX, DECIMALS .XXX ±.02, .005, ANGLES ±1°
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

HEAT TREATMENT: —

FINAL FINISH: —

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. / CONTRACT

DRAWN J Crawley DATE 8-29-62
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 9/16/63
MIT APPROVAL 9/16/63

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

BUS BAR, SINGLE LUG

CODE IDENT NO.	SIZE	NASA DRAWING NO.
80230	C	1008142

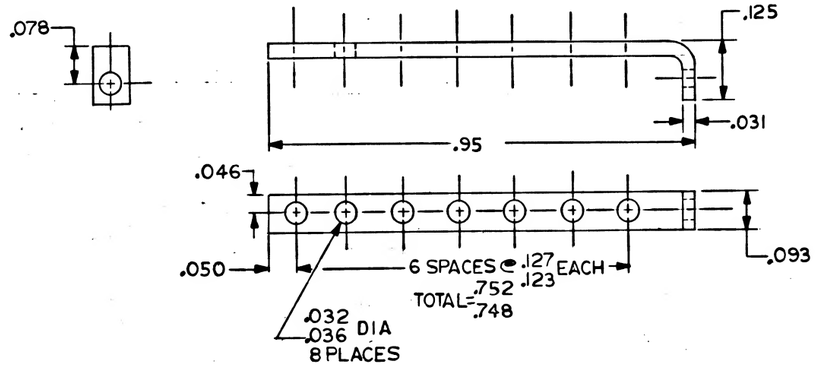
SCALE 5:1 | WT | SHEET OF

1008142 B1

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008142

REVISIONS TDER 03320			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MATERIAL: COPPER PER QQ-C-504-2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ±.XX DECIMALS ±.02 ANGLES ±1° .XXX .005
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN J Crowley DATE 8-29-63
CHECKED
APPROVAL 9-25-63
APPROVAL 9-25-63
NASA APPROVAL 9/14/63
MIT APPROVAL 9/26/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

BUS BAR, SINGLE LUG

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1008142
SCALE 5:1 | WT | SHEET OF

MASTER

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

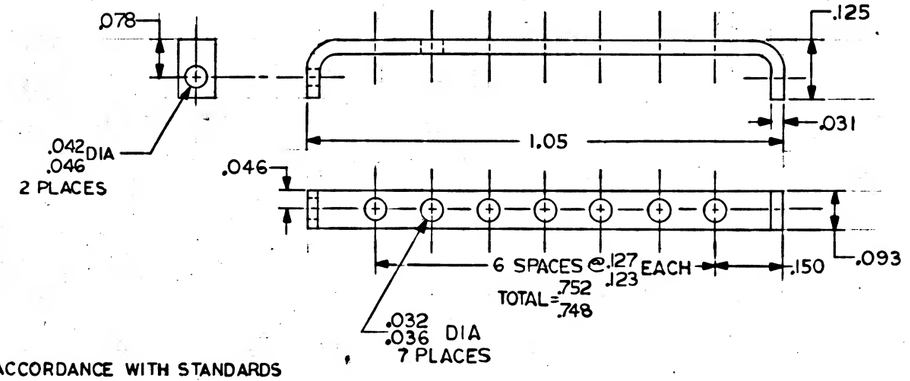
1008142 B

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

A	1008143

REVISIONS TDR2 03320

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 05263	10-17-63	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: COPPER PER QQ-C-504-2

MASTER

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±.XX .XXX | DECIMALS ±.02 .005 | ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT: //
FINAL FINISH: //

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN J Crowley DATE 8-29-63
CHECKED
APPROVAL 9-5-63
APPROVAL 9 Sept 63

BUS BAR, DOUBLE LUG

NASA APPROVAL 9/16/63
MIT APPROVAL 9/26/63

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008143

SCALE 5:1 | WT | SHEET OF

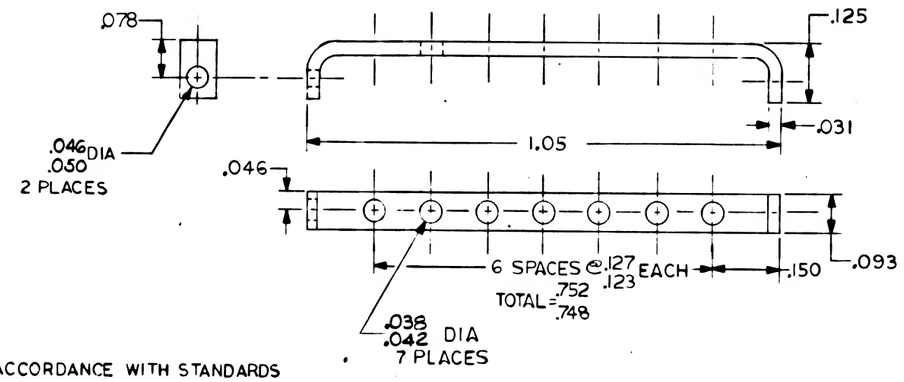
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008143

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

B 1008143

REVISIONS TDRR 03320			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 05263	12-11-63	
B	REVISED PER TDRR 18310	20 APR 64	



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: COPPER PER QQ-C-504-2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±.XX DECIMALS ±.02 ANGLES ±1°
.XXX .005
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT: —//—
FINAL FINISH: —//—

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. CONTRACT
DRAWN [illegible] DATE 8 29 63
CHECKED
APPROVAL [illegible] 12-5-63
APPROVAL [illegible] 9 26 63
NASA APPROVAL [illegible] 9/26/63
MIT APPROVAL [illegible] 9/26/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

BUS BAR, DOUBLE LUG

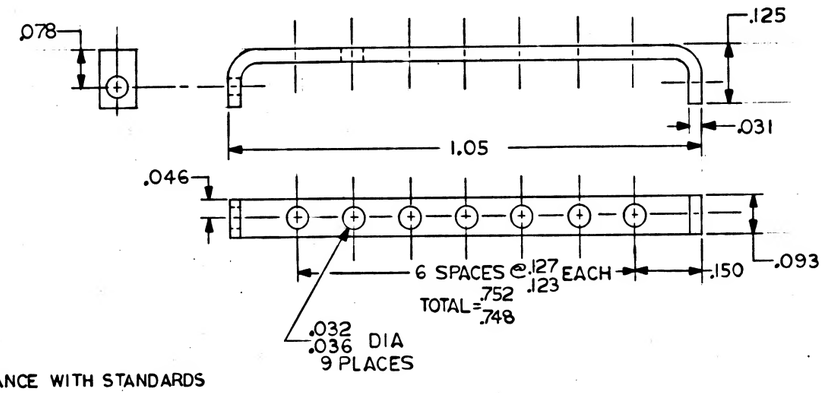
CODE IDENT NO.	SIZE	NASA DRAWING NO.
80230	C	1008143
SCALE 5:1	WT	SHEET OF

1008043 B

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008143

REVISIONS IDEE 03320			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: COPPER PER QQ-C-504-2

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±.XX DECIMALS ±.02 .XXX .005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

HEAT TREATMENT: —"—

FINAL FINISH: —"—

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN J. Gourley DATE 8-29-63
CHECKED
APPROVAL R. Chisholm 9-25-63
APPROVAL R. Tuttle Nov. 9 1963
NASA APPROVAL R. Marshall 9/26/63
MIT APPROVAL D. Hoag 9/26/63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

BUS BAR, DOUBLE LUG

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1008143
SCALE 5:1 | WT | SHEET OF

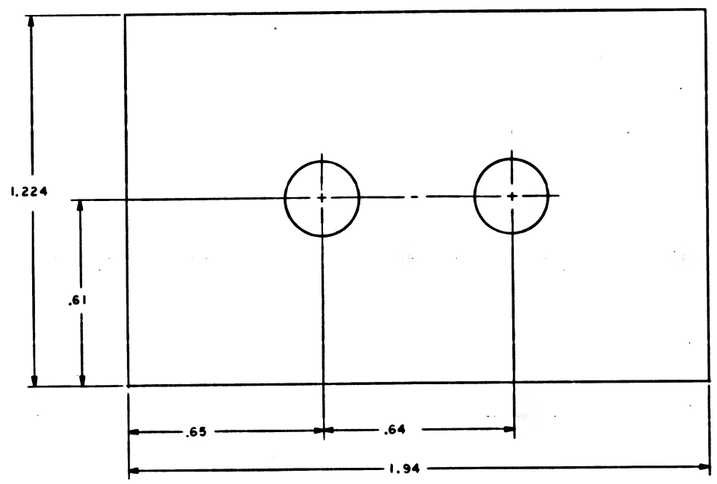
MASTER

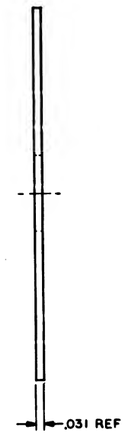
INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

1008143

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TDRR 9 3 81			
SYM	DESCRIPTION	DATE	APPROVAL





NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: GLASS EPOXY PER MIL-P-18177, TYPE GEE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± .000=.005 ± .00=.02 DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTES
1007097		HEAT TREATMENT
NEXT ASSY	USED ON	FINAL FINISH
APPLICATION		

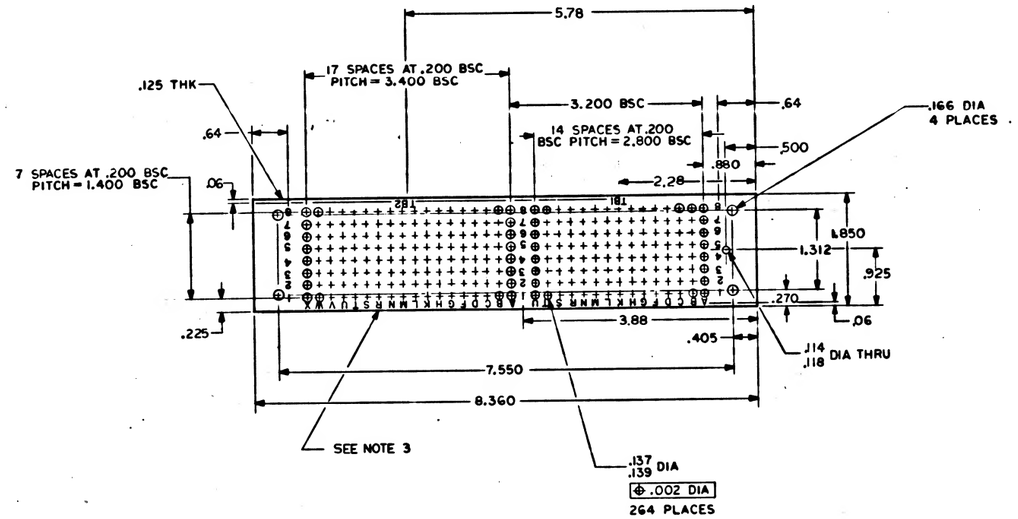
M I T INSTRUMENTATION LAB CAMBRIDGE, MASS. DWG. NO. CONTRACT	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN Tom Edison DATE 8/26/63	WAFER BOARD 800 CPS COMPENSATION MODULE, OPTICS
CHECKED	
APPROVAL E.L. Ladd 9/25/63	
APPROVAL R. Richard 9/25/63	
NASA APPROVAL	CODE IDENT NO. / SIZE D / NASA DRAWING NO. 1008144
MIT APPROVAL C. Hoyd 9/26/63	SCALE 5/1 / WT / SHEET 1 OF 1

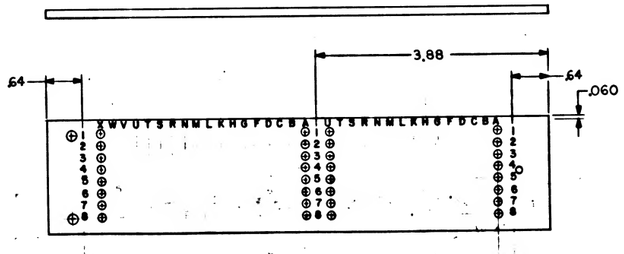
1008144

INCHES 0 2 PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 0970	7 Nov 63	1179





NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327
3. MARK .100/.060 HIGH BLACK APPROXIMATELY WHERE SHOWN
4. TOLERANCES: 2 PLACE DECIMAL ± .010
3 PLACE DECIMAL ± .005

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS: ± DECIMALS: ± SEE NOTE 4 ANGLES: ±
		DO NOT SCALE THIS DRAWING
		MATERIAL: SEE NOTE 2
1008148		HEAT TREATMENT
NEXT ASSY	USED ON	FINAL FINISH
APPLICATION		

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DSR NO. — CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN [illegible] DATE 10-8-63
CHECKED [illegible]
APPROVAL [illegible] 10-8-63
APPROVAL

NASA APPROVAL [illegible] 10-7-63
MIT APPROVAL [illegible] 10-8-63

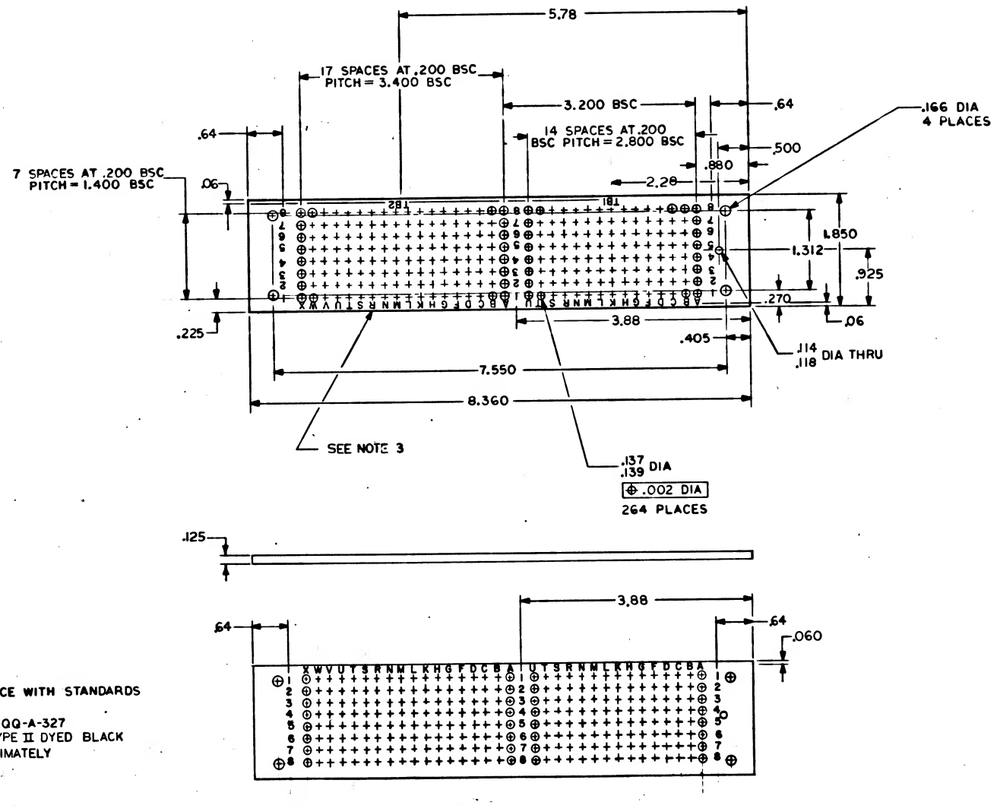
CONNECTOR PLATE 264 PINS AGE HARNESS PSA END CONN

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008146
SCALE 1/1	WT	SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER. AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 09470	7 NOV 63	
B	REVISED PER TDRR 05960	29 JAN 63	



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327
3. FINISH: ANODIZE PER MIL-A-8625 TYPE II DYED BLACK
4. MARK .100/.060 HIGH WHITE APPROXIMATELY WHERE SHOWN PER ND1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1008148	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX±.010 XXX±.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

M I T INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. | CONTRACT
DRAWN K. Schaper DATE 7 SEP 62
CHECKED R. Kilpatrick DATE 10-8-62
APPROVAL D. Hoag DATE 10-8-62
APPROVAL
NASA APPROVAL W. J. Phillips 10-1-63
MIT APPROVAL W. Hoag 10-8-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

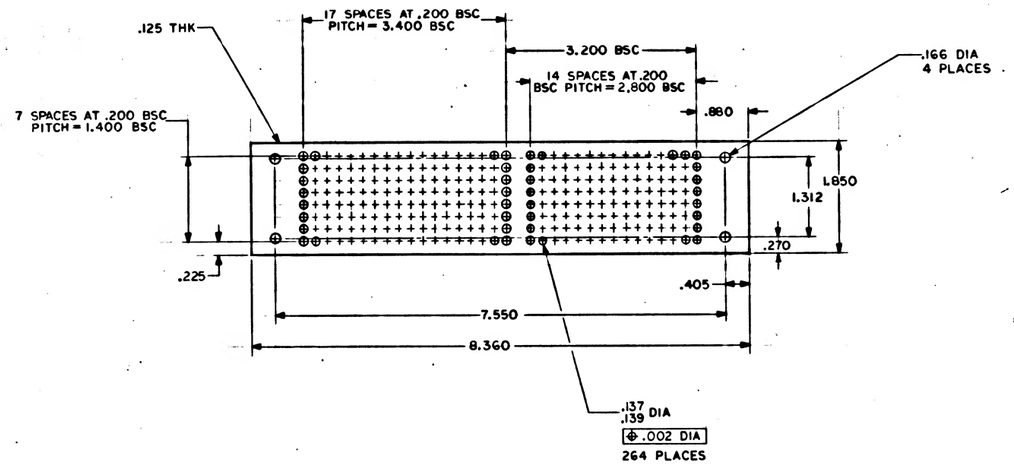
CONNECTOR PLATE 264 PINS AGE HARNESS PSA END CONN

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008146
SCALE 1/1 | WT | SHEET 1 OF 1

1008146 B

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03254			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUN 6061-T6 PER QQ-A-327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .005 ANGLES ± DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DEPT. NO. CONTRACT
		MATERIAL SEE NOTE 2	DRAWN [illegible] DATE 5 SEPT 63
		HEAT TREATMENT	CHECKED [illegible] DATE 9-20-63
1008148		FINAL FINISH	APPROVAL [illegible] DATE 10-8-63
NEXT ASSY	USED ON	APPLICATION	APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE 264 PINS AGE HARNESS PSA END CONN

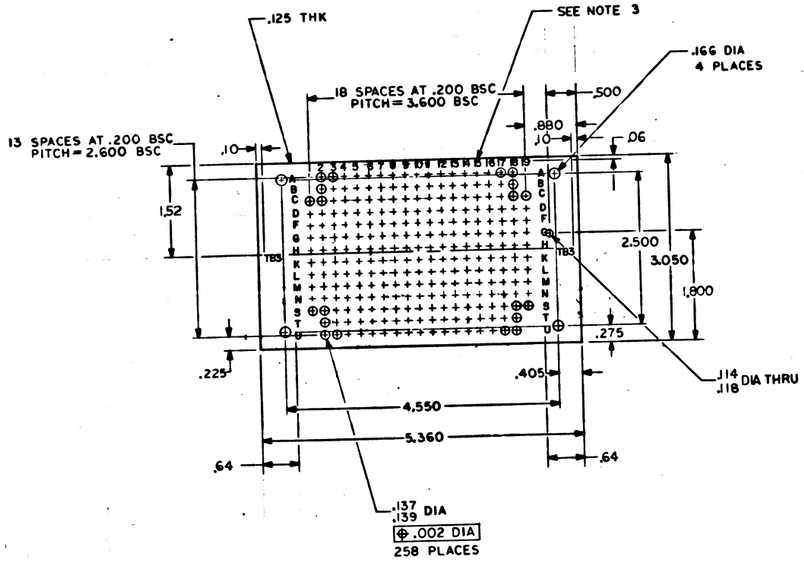
NASA APPROVAL [illegible] DATE 10-8-63
MIT APPROVAL [illegible] DATE 10-8-63

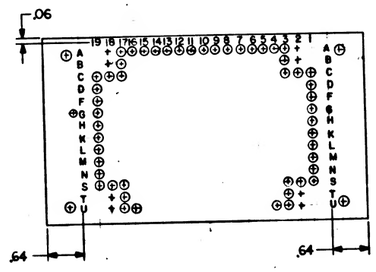
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008146
SCALE 1/1	WT	SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE U.S. GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 09672	1 NOV 63	





NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327
3. MARK .100/.060 HIGH BLACK APPROXIMATELY WHERE SHOWN
4. TOLERANCES: 2 PLACE DECIMAL ±.010
   3 PLACE DECIMAL ±.005

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
	TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± SEE NOTE 4
	DO NOT SCALE THIS DRAWING
	MATERIAL SEE NOTE 2
1008149	HEAT TREATMENT
NEXT ASSY / USED ON	FINAL FINISH
APPLICATION	

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. / CONTRACT
DRAWN D. Ferguson DATE 10-8-63
CHECKED R. Young, Jr. 10-8-63
APPROVAL D. Bell 10-8-63
APPROVAL
NASA APPROVAL W. J. Adams 10-8-63
MIT APPROVAL W. Hayden Davis

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE 258 PINS AGE HARNESS PSA END CONN

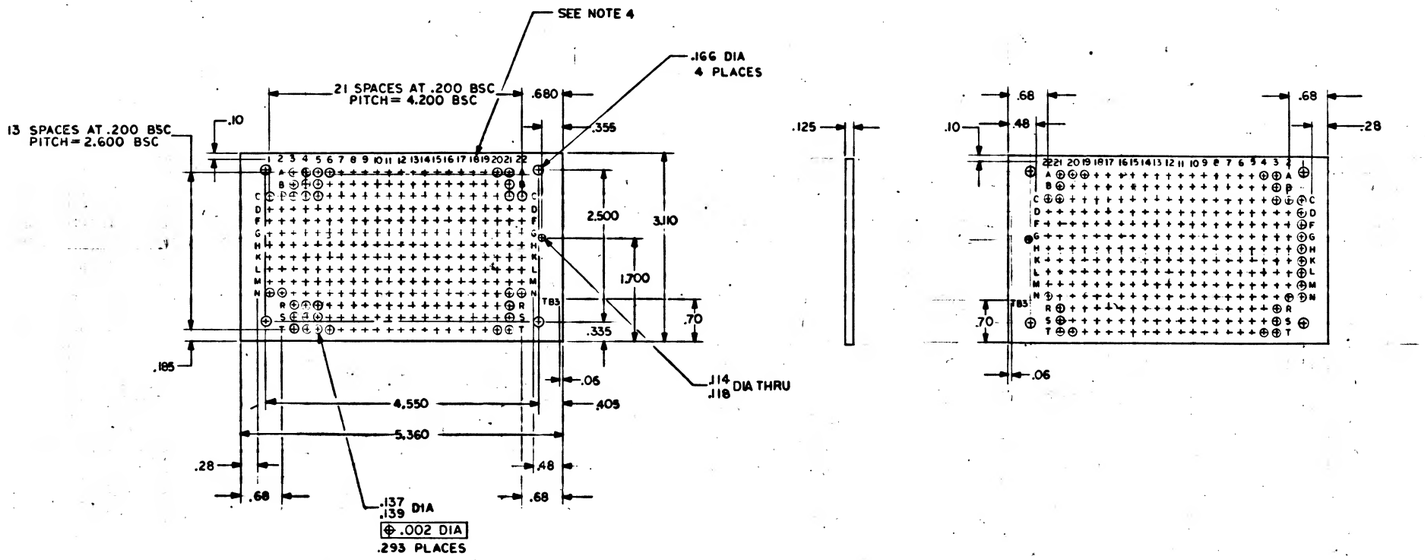
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008147
SCALE 1/1	WT	SHEET 1 OF 1

MASTER

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 09672	9 NOV 62	
B	REVISED PER TDRR 05867	28 JAN 63	



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327
3. FINISH: ANODIZE PER MIL-A-8625 TYPE II DYED BLACK
4. MARK .100/.060 HIGH WHITE APPROXIMATELY WHERE SHOWN PER ND 1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX± .010 XXX± .005 ANGLES ± DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
HEAT TREATMENT	
FINAL FINISH	SEE NOTE 3
1008149 NEXT ASSY / USED ON	
APPLICATION	

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DWG. NO. / CONTRACT

DRAWN [illegible] DATE 12 APR 62
CHECKED R. Dang JULY 8 1963
APPROVAL [illegible] 8-8-62
APPROVAL
NASA APPROVAL W. J. Adams 10-8-63
MIT APPROVAL W. Hugh Peters

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE
. 293 PINS
AGE HARNESS PSA END CONN

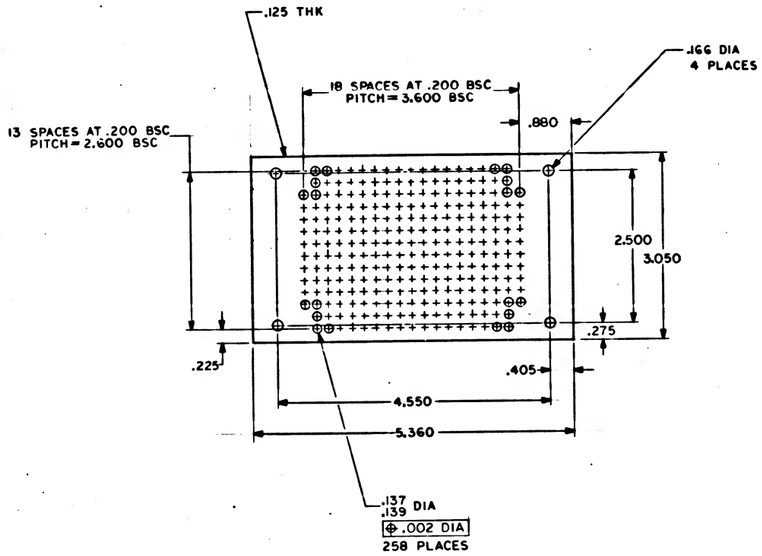
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008147

SCALE 1/1 | WT | SHEET 1 OF 1

MASTER

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION, OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1008149	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS
DEPT. NO. CONTRACT
DRAWN L. Falzone DATE 9-10-63
CHECKED R. King, Jury 9-10-63
APPROVAL W. Ross 9-10-63
APPROVAL

NASA APPROVAL W. J. Hubbard 10-2-63
MIT APPROVAL W. Ross 10-2-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE 258 PINS AGE HARNESS PSA END CONN

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008147
SCALE 1/1	WT	SHEET 1 OF 1

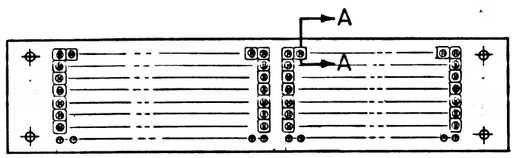
1008147

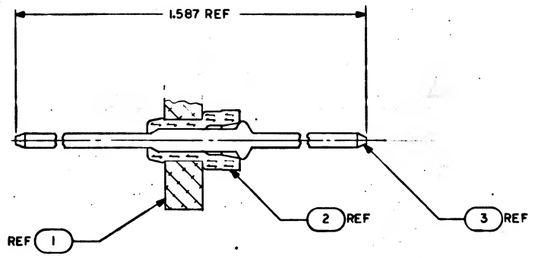
MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

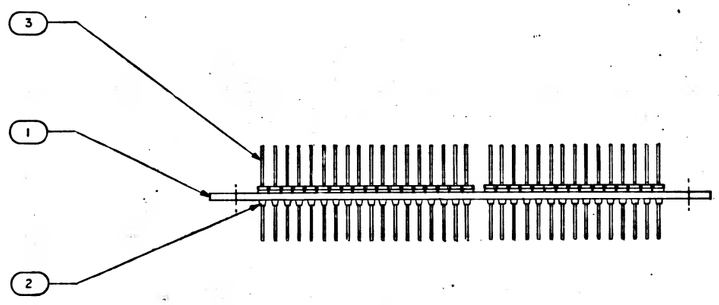
NOTICE - THIS GOVERNMENT DRAWING, SPECIFICATION, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWING, SPECIFICATION, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04467		





SECTION A A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
231	1010659-5	TERMINAL, DOUBLE ENDED W RAPOST	3
231	1010383	INSULATOR, W RAPOST, MALE	2
1	1008146	CONNECTOR PLATE	1

LIST OF MATERIALS

1014605	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN Tony Bell DATE 3/12/63
CHECKED R.R. Ryan Jr. 3/14/63
APPROVAL D. M. Hunt 10-1-63
APPROVAL
NASA APPROVAL W.J. Kelly 10-1-63
MIT APPROVAL W. Taylor Dick

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

CONNECTOR PLATE ASSY
264 PINS
AGE HARNESS PSA END CONN

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008148
SCALE 1/1	WT	SHEET 1 OF 1

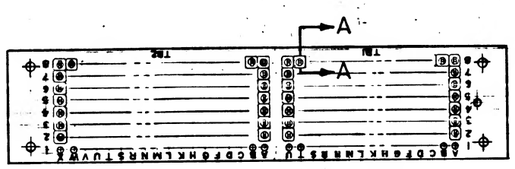
MASTER

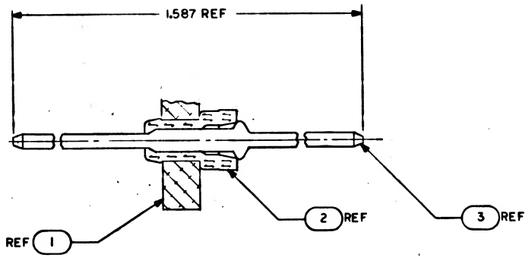
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008148 A

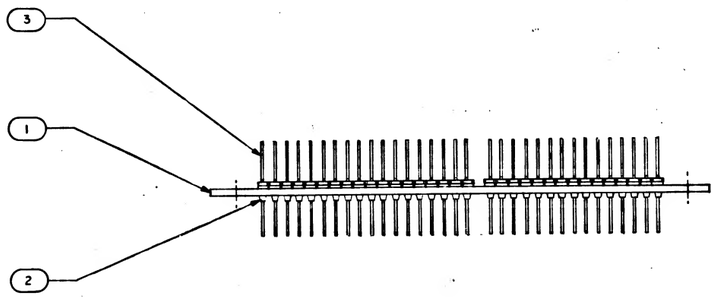
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 0354			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04467		
B	REVISED PER TDRR 04681		





SECTION AA
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
231	1010659-5	TERMINAL, DOUBLE ENDED WRAPOST	3
231	1010383	INSULATOR, WRAPOST, MALE	2
1	1008146	CONNECTOR PLATE	1

LIST OF MATERIALS

1014605	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN Jerry Ball DATE 3/12/63
CHECKED R. Bruce Tuttle 3/27/63
APPROVAL W. H. Peters 3-28-63
APPROVAL
NASA APPROVAL W. J. Peters 10-1-63
MIT APPROVAL W. Hoffman

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE ASSY 264 PINS AGE HARNESS PSA END CONN

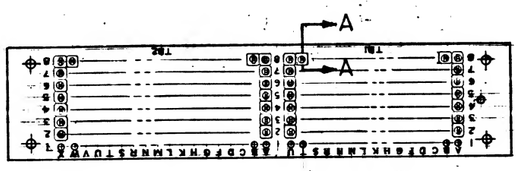
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008148
SCALE 1/1	WT	SHEET 1 OF 1

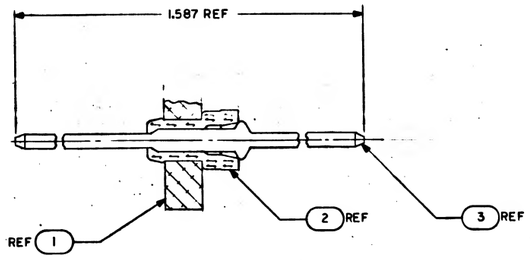
MASTER

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

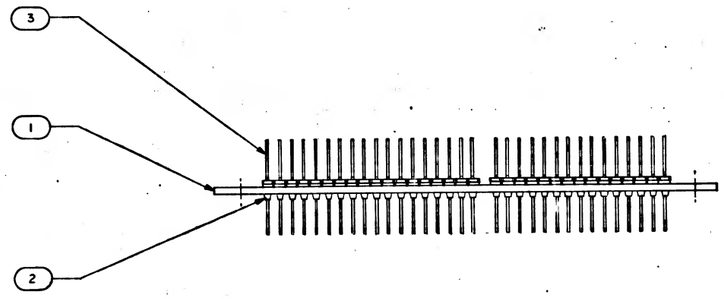
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04467		
B	REVISED PER TDRR 04681		
C	REVISED PER TDRR 05543		





SECTION A A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
231	1010659-5	TERMINAL, DOUBLE ENDED WRAPOST	3
231	1010383	INSULATOR, WRAPOST, MALE	2
1	1008146	CONNECTOR PLATE	1

1014606	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN Stan Byall DATE 2/12/63
CHECKED R. Rumsey 2-20-63
APPROVAL D. Hoag 2-20-63
APPROVAL
NASA APPROVAL W. Schneider 2-7-63
MIT APPROVAL W. Kaufman 2-20-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE ASSY 264 PINS AGE HARNESS PSA END CONN

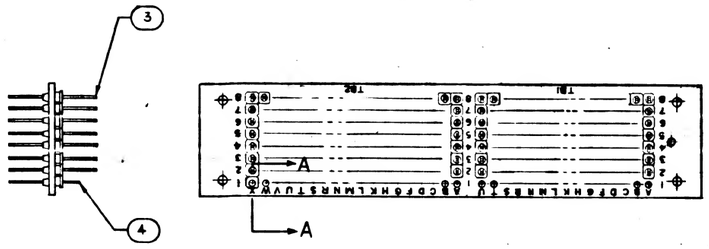
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008148
SCALE 1/1	WT	SHEET 1 OF 1

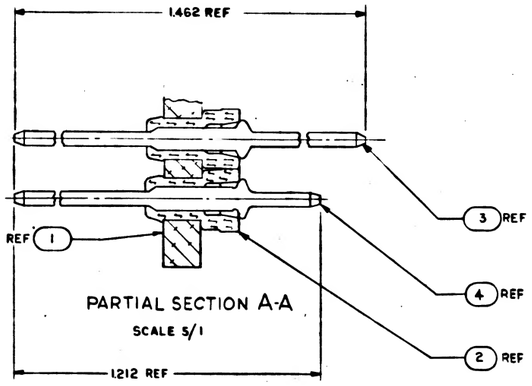
MASTER

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

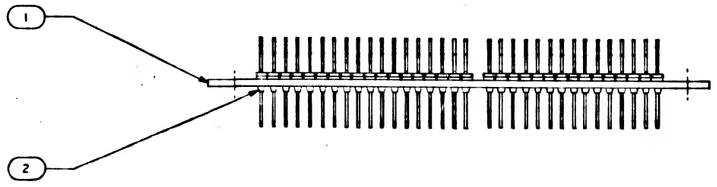
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT INCURS NO RESPONSIBILITY AND OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 0375-4			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04467		
B	REVISED PER TDRR 04681	9 AUG 63	
C	REVISED PER TDRR 05543	9 DEC 63	
D	REVISED PER TDRR 06991	8 APR 64	J.J. V.E.G.





PARTIAL SECTION A-A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			
33	1010659-1	TERMINAL, DOUBLE ENDED WRAPOST	4
231	1010659-4	TERMINAL, DOUBLE ENDED WRAPOST	3
264	1010383	INSULATOR, WRAPOST, MALE	2
1	1008146	CONNECTOR PLATE	1

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	M I T INSTRUMENTATION LAB Cambridge 39, Mass. Contract NAS 9-497
		DO NOT SCALE THIS DRAWING	DRAWN Tony Buell DATE 7/12/63
		MATERIAL	CHECKED R. Brown Jr. 8/16/63
		HEAT TREATMENT	APPROVAL E. A. Trost 12-8-63
1014606		FINAL FINISH	APPROVAL
NEXT ASSY	USED ON		NASA APPROVAL W. J. Kelly 10-7-63
APPLICATION			MIT APPROVAL W. Kyle Dirks

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

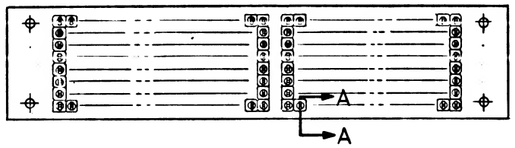
CONNECTOR PLATE ASSY 264 PINS AGE HARNESS PSA END CONN

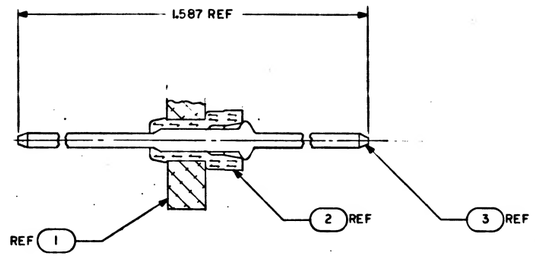
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008148
SCALE 1/1	WT	SHEET 1 OF 1

1008148 D

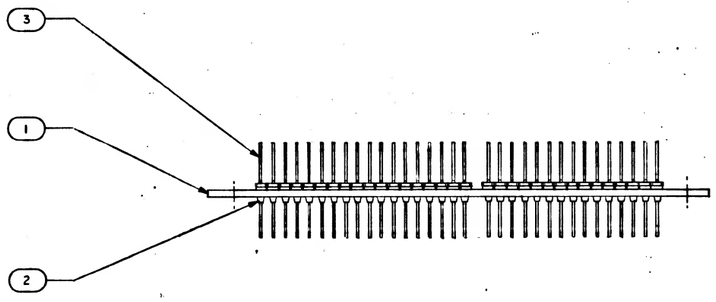
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 0375			
SYM	DESCRIPTION	DATE	APPROVAL





SECTION A A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO.1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
264	1010659-5	TERMINAL, DOUBLE ENDED WRAPOST	3
264	1010383	INSULATOR, WRAPOST, MALE	2
1	1008146	CONNECTOR PLATE	1

LIST OF MATERIALS

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
	DO NOT SCALE THIS DRAWING
	MATERIAL
1014605	HEAT TREATMENT
NEXT ASSY / USED ON	FINAL FINISH
APPLICATION	

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS. — MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN Jerry Bigel DATE 5/12/63
CHECKED L.P.K. Nov 8 07:63
APPROVAL W.R. Hunt 10-8-63
APPROVAL

NASA APPROVAL W.J. Rhine 10-5-63
MIT APPROVAL W. Hunt 10-8-63

CONNECTOR PLATE ASSY 264 PINS - AGE HARNESS PSA END CONN

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008148
SCALE 1/1	WT	SHEET 1 OF 1

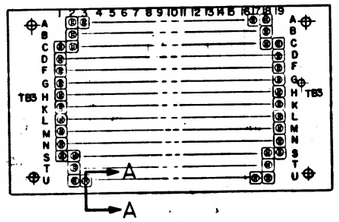
1008148

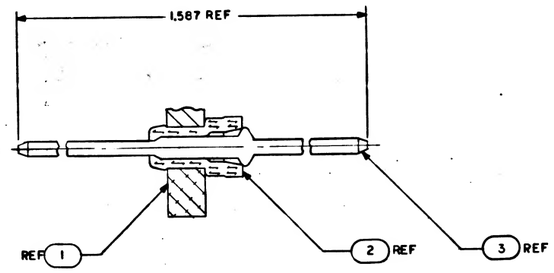
MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

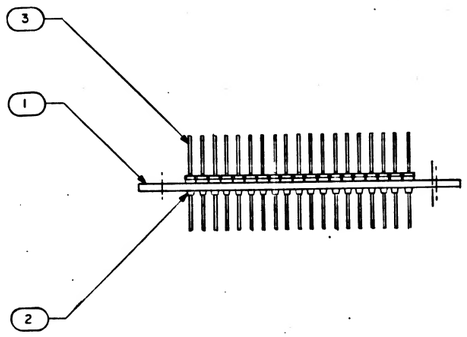
NOTICE — WHEN GOVERNMENT DRAWINGS SPECIFICATIONS OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 0967/	4/29	





SECTION AA
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
258	1010659-5	TERMINAL, DOUBLE END WRAPOST	3
258	1010383	INSULATOR, WRAPOST, MALE	2
1	1008147	CONNECTOR, PLATE	1

LIST OF MATERIALS

1014605	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DWG. NO. CONTRACT
DRAWN [illegible] DATE 2/14/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE ASSY 258 PINS AGE HARNESS PSA END CONN

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008149
SCALE 1/1	WT	SHEET 1 OF 1

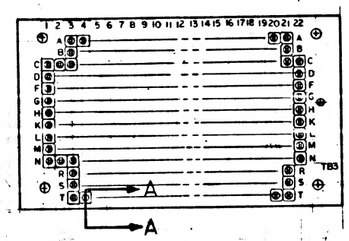
MASTER

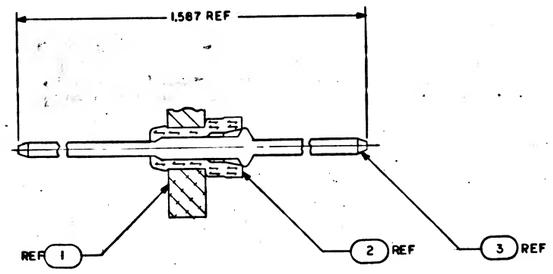
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

1008149 A

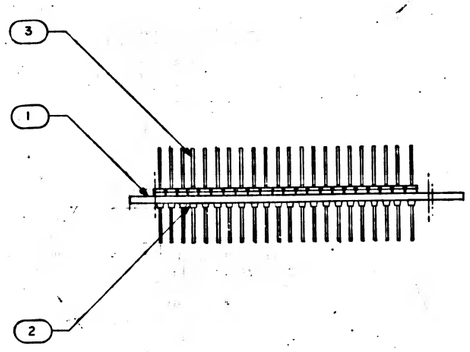
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 03284			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 09671	11-6-68	
B	REVISES PER TDRR 05168	12-23-68	





SECTION AA
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
293	1010659-5	TERMINAL, DOUBLE END WRAPOST	3
293	1010383	INSULATOR, WRAPOST, MALE	2
1	1008147	CONNECTOR, PLATE	1

LIST OF MATERIALS

1014606	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES
XX=010
XXX=005
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. CONTRACT
DRAWN [illegible] DATE 2/14/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE ASSY 293 PINS AGE HARNESS PSA END CONN

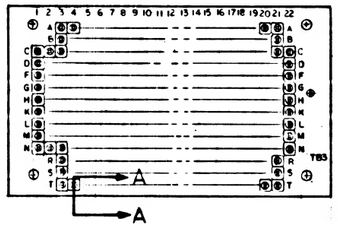
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008149
SCALE 1/1	WT	SHEET 1 OF 1

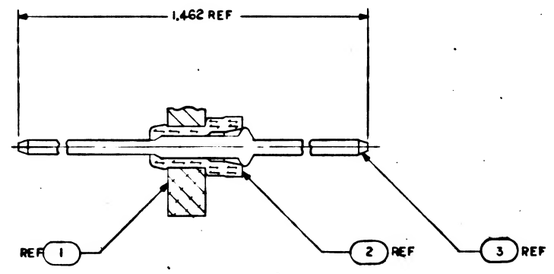
MASTER

1008149 D

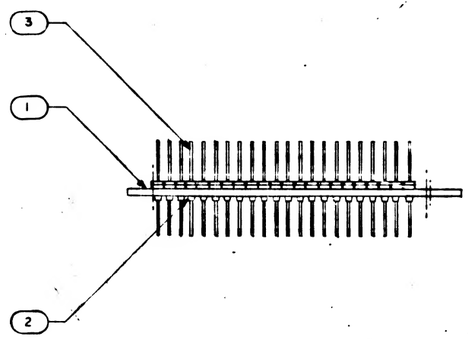
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 0967/		
B	REVISES PER TDRR 05066		
C	REVISED PER TDRR 06990		





SECTION A A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
293	1010659-4	TERMINAL, DOUBLE END WRAPOST	3
293	1010383	INSULATOR, WRAPOST, MALE	2
1	1008147	CONNECTOR, PLATE	1

LIST OF MATERIALS

	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
	TOLERANCES ON FRACTIONS ± DECIMALS XX=010 ± XXX=005 ANGLES ±
	DO NOT SCALE THIS DRAWING
	MATERIAL
1014606	HEAT TREATMENT
NEXT ASSY / USED ON	FINAL FINISH
APPLICATION	

MIT INSTRUMENTATION LAB, CAMBRIDGE MASS. — CONTRACT NAS 9-497

DRAWN [illegible] DATE 2/14/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL

NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

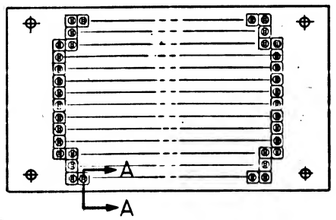
CONNECTOR PLATE ASSY 293 PINS AGE HARNESS PSA END CONN

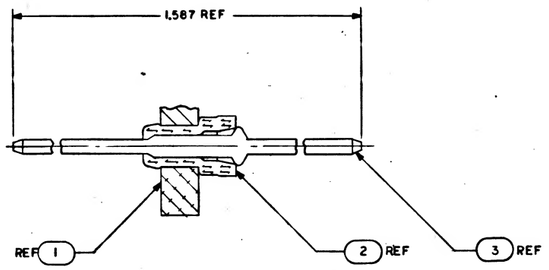
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008149
SCALE 1/1	WT	SHEET 1 OF 1

1008149 C

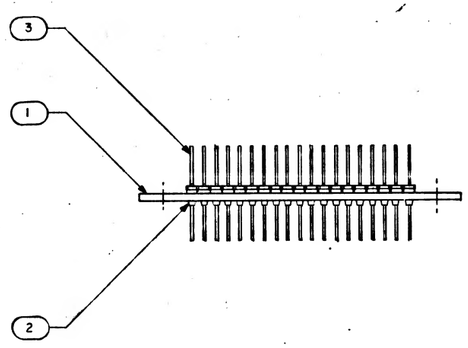
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL





SECTION A A
SCALE 5/1



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ASSEMBLE FIND NO. 2 & 3 TO FIND NO. 1 PER ND 1002136

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
258	1010659-5	TERMINAL, DOUBLE END WRAPOST	3
258	1010383	INSULATOR, WRAPOST, MALE	2
1	1008147	CONNECTOR, PLATE	1

LIST OF MATERIALS

1014605	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN [signature] DATE 3/14/63
CHECKED [signature]
APPROVAL [signature]
APPROVAL
NASA APPROVAL [signature] 10-2-63
MIT APPROVAL [signature]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR PLATE ASSY 258 PINS AGE HARNESS PSA END CONN

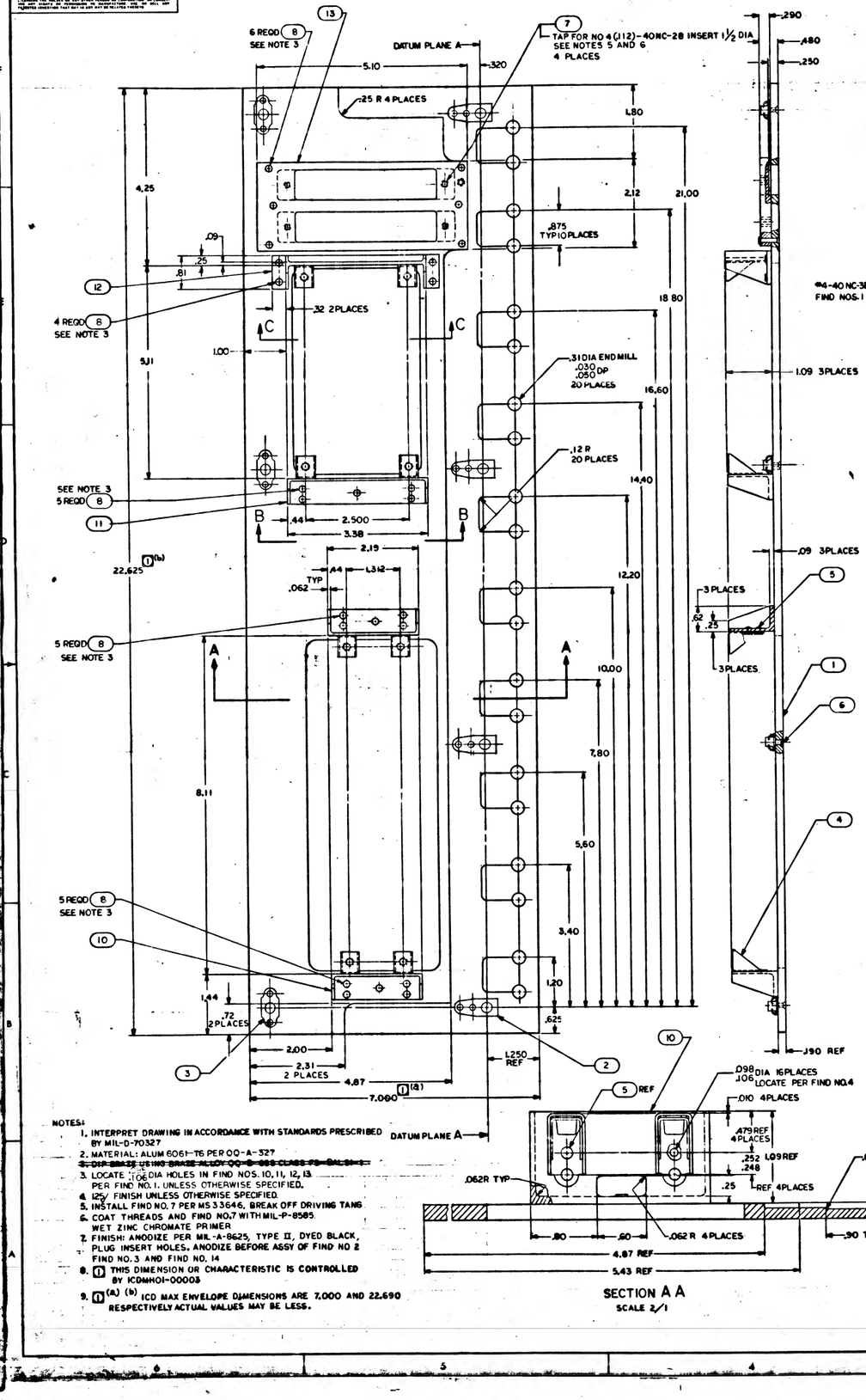
CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008149
SCALE 1/1	WT	SHEET 1 OF 1

1008149

MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

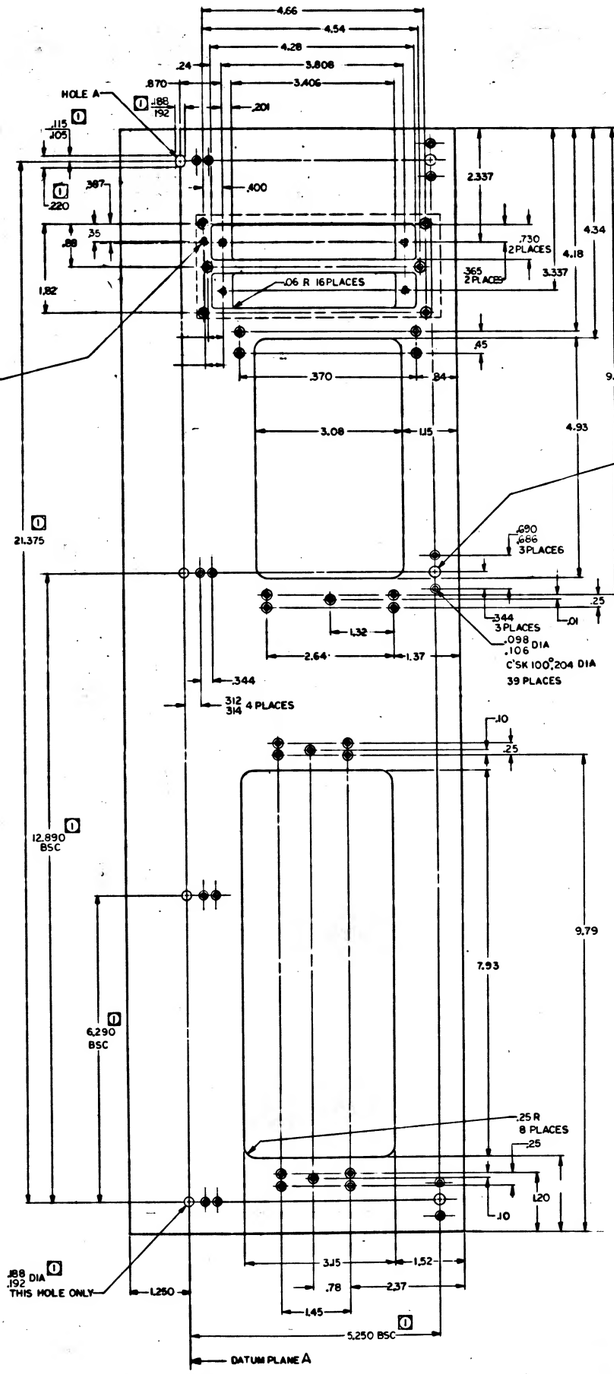
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04459		

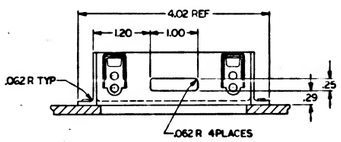


NOTES:

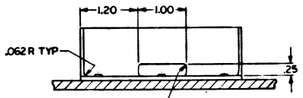
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. ~~CUT PARTS IF USING SHAPE IN STOCK QQ-A-225 CLASS 7B CALSH-1.~~
4. LOCATE .106 DIA HOLES IN FIND NOS. 10, 11, 12, 13 PER FIND NO. 1. UNLESS OTHERWISE SPECIFIED.
5. 125√ FINISH UNLESS OTHERWISE SPECIFIED.
6. INSTALL FIND NO. 7 PER MS 33646, BREAK OFF DRIVING TANG
7. COAT THREADS AND FIND NO. 7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 3 AND FIND NO. 14
9. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003
10. (1)(a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.

SECTION A A
SCALE 2/1





PARTIAL SECTION C-C



PARTIAL SECTION B-B

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	1008150-5	PLATE	13
1	1008150-4	BRACKET	12
1	1008150-3	BRACKET	11
2	1008150-2	BRACKET	10
6	MS20426-AD3-10	RIVET CSK HD	9
19	MS20426-AD3-6	RIVET CSK HD	8
4	MS21209-C0415	INSERT, SCREW LOCKING	7
14	MS20426-AD3-5	RIVET CSK HD	6
16	MS20470-AD3-4	RIVET UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-686-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

LIST OF MATERIALS

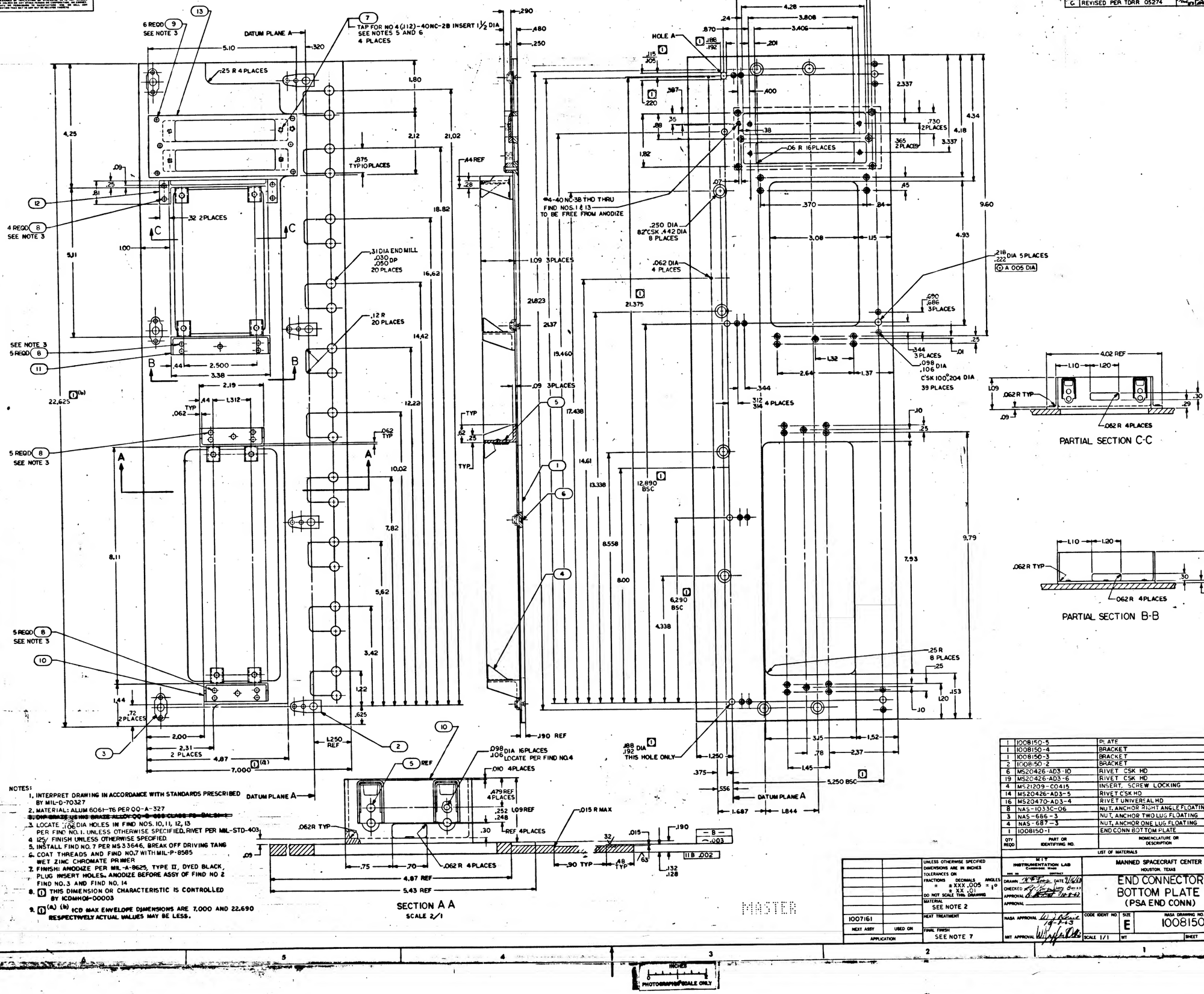
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES = ±XXX .005 = 1° ± XX .01 DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
MATERIAL SEE NOTE 2	DRAWN [illegible] DATE 7/16/63	END CONNECTOR BOTTOM PLATE (PSA END CONN)	
HEAT TREATMENT	CHECKED [illegible]		
FINAL FINISH SEE NOTE 7	APPROVAL [illegible]		
1007161 NEXT ASSY USED ON	NASA APPROVAL [illegible] 10-2-63	CODE IDENT NO.	SIZE E
APPLICATION	MIT APPROVAL [illegible]	SCALE 1/1 WT	NASA DRAWING NO. 1008150 SHEET 1 OF 1

1008150 A

MASTER

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS	DATE	APPROVAL
A	REVISED PER TDRR C4459		
B	REVISED PER TDRR 05272		
C	REVISED PER TDRR 05274		



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. ~~DIP BRAZE~~ ~~THIS BRAZE ALLOY QQ-B-636 CLASS 2B~~ ~~BAL SIL-1~~
3. LOCATE .196 DIA HOLES IN FIND NOS. 10, 11, 12, 13 PER FIND NO. 1. UNLESS OTHERWISE SPECIFIED. RIVET PER MIL-STD-403
4. 125 FINISH UNLESS OTHERWISE SPECIFIED.
5. INSTALL FIND NO. 7 PER MS 33646, BREAK OFF DRIVING TANG
6. COAT THREADS AND FIND NO. 7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
7. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 3 AND FIND NO. 14
8. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003
9. (1)(a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
1	1008150-5	PLATE	13
1	1008150-4	BRACKET	12
1	1008150-3	BRACKET	11
2	1008150-2	BRACKET	10
6	MS20426-AD3-10	RIVET CSK HD	9
19	MS20426-AD3-6	RIVET CSK HD	8
4	MS21209-C0415	INSERT, SCREW LOCKING	7
14	MS20426-AD3-5	RIVET CSK HD	6
16	MS20470-AD3-4	RIVET UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-666-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

LIST OF MATERIALS

1007161	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± .XXX .005 ANGLES ± 1°
± .XX .01
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH SEE NOTE 7

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN [illegible] DATE 2/4/63
CHECKED [illegible]
APPROVAL [illegible] 10-8-62
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

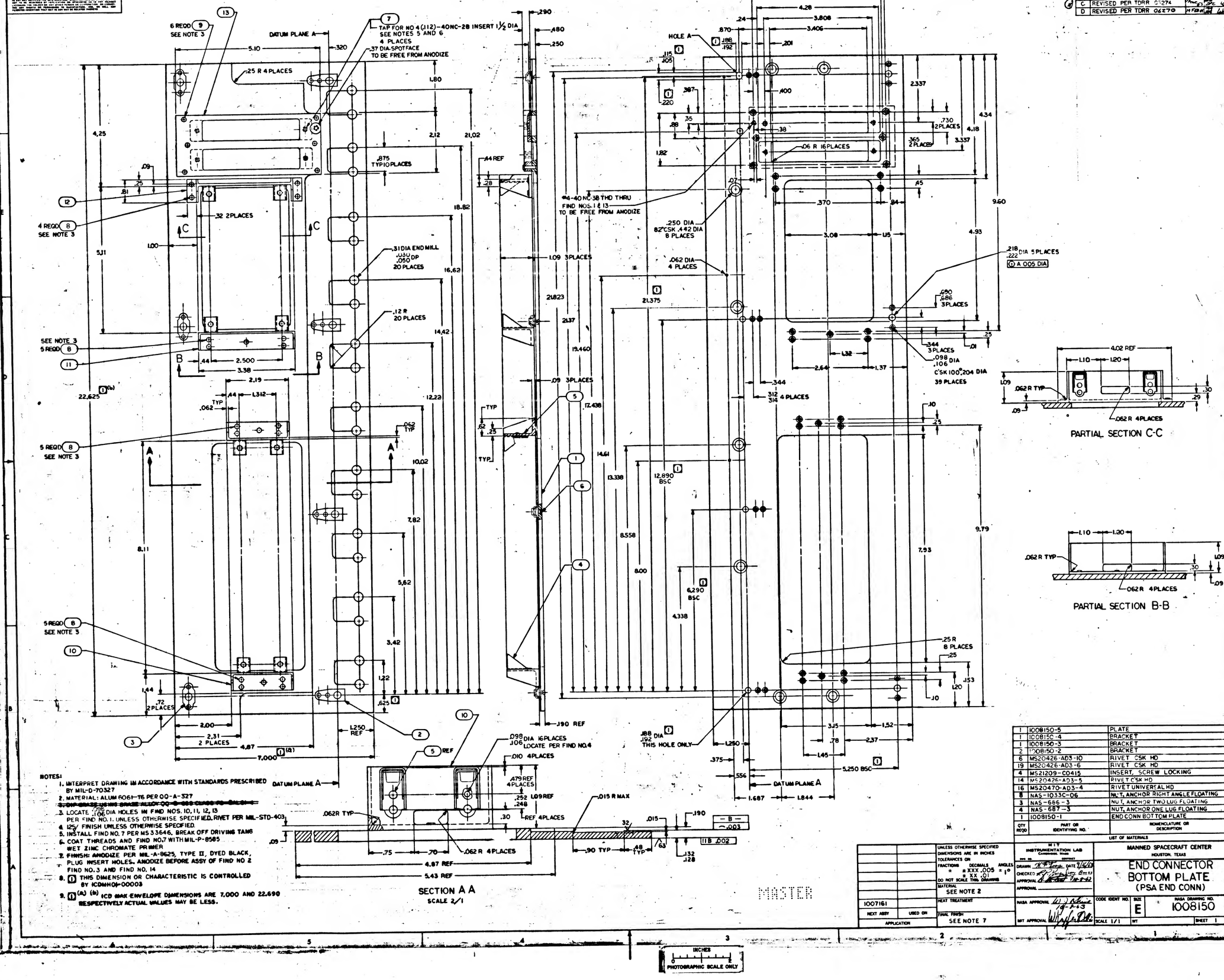
END CONNECTOR BOTTOM PLATE (PSA END CONN)

CODE IDENT NO | SIZE E | NASA DRAWING NO. 1008150
SCALE 1/1 | WT | SHEET 1 OF 1

MASTER

INCHES PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04459		
B	REVISED PER TDRR 05272		
C	REVISED PER TDRR 01274		
D	REVISED PER TDRR 06270		



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. ~~DO NOT USE ZINC BASE ALLOY QQ-M-565 CLASS 5A OR 5B~~
4. LOCATE .106 DIA HOLES IN FIND NOS. 10, 11, 12, 13 PER FIND NO. 1. UNLESS OTHERWISE SPECIFIED. RIVET PER MIL-STD-403
5. 125 FINISH UNLESS OTHERWISE SPECIFIED.
6. INSTALL FIND NO. 7 PER MS 33646. BREAK OFF DRIVING TANG
7. COAT THREADS AND FIND NO. 7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
8. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 3 AND FIND NO. 14
9. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMNH0-00003
10. (1)(a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
1	1008150-5	PLATE	15
1	1008150-4	BRACKET	12
1	1008150-3	BRACKET	11
2	1008150-2	BRACKET	10
6	MS20426-AD3-10	RIVET CSK HD	9
19	MS20426-AD3-6	RIVET CSK HD	8
4	MS21209-C0415	INSERT, SCREW LOCKING	7
14	MS20426-AD3-5	RIVET CSK HD	6
16	MS20470-AD3-4	RIVET UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-666-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

LIST OF MATERIALS

1007161	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± XXX .005 ANGLES ± 1°
± XX .01
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH SEE NOTE 7

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DWG NO CONTRACT
DRAWN [illegible] DATE 2/6/62
CHECKED [illegible] DATE 2 mar 62
APPROVAL [illegible] DATE 2-8-62
APPROVAL
NASA APPROVAL [illegible] 2-16-62
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

END CONNECTOR BOTTOM PLATE (PSA END CONN)

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008150
SCALE 1/1	WT	SHEET 1 OF 1

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04459		
B	REVISED PER TDRR 05272		
C	REVISED PER TDRR 05274		
D	REVISED PER TDRR 04279		
E	REVISED PER TDRR 07288		
F	REVISED PER TDRR 07389		

6 REQD (9) SEE NOTE 3

(13)

DATUM PLANE A

5.10

.320

(7) TAP FOR NO 4 (.112)-40NC-2B INSERT 1½ DIA SEE NOTES 5 AND 6 4 PLACES

.37 DIA SPOTFACE TO BE FREE FROM ANODIZE

.25 R 4 PLACES

1.80

4.25

2.12

21.02

.875 TYP 10 PLACES

.09 .25 .81

(12)

4 REQD (8) SEE NOTE 3

.32 2PLACES

C C

5.31

1.00

18.82

.31 DIA END MILL .030 .050 DP 20 PLACES

16.62

.12 R 20 PLACES

14.42

SEE NOTE 3 5 REQD (8)

(11)

B B

.44 2.500 3.38

2.19

(1)(b) 22.625

.44 1.312 TYP .062

12.23

.062 TYP

5 REQD (8) SEE NOTE 3

A A

10.02

7.82

8.11

5.62

3.42

5 REQD (8) SEE NOTE 3

(10)

1.44 .72 2PLACES

1.22

.625 (1)

(3)

2.00 2.31 2 PLACES 4.87 7.000 (1)(a)

1.250 REF

(2)

.290 .480 .250

.44 REF .28

1.09 4PLACES

21.823

21.37

* 19.460 SEE NOTE 10

(5)

17.438

TYP .62 .25 TYP

(1)

14.61

13.338

(6)

12.890 BSC

(4)

8.558

8.00

6.290 BSC

4.338

.224

.188 .192 DIA (SEE NOTE 10)

4.66 4.54 4.28 3.808 3.406

.24 .870

HOLE A (1) .188 .192

.201

.115 .105 (1)

.220 (1)

.387 .400

2.337

.35 .88 .38

.730 2PLACES

4.34 4.18

.365 2PLACES

3.337

.06 R 16PLACES

1.82

.07 .45

#4-40 NC-38 THD THRU FIND NOS. 1 & 13 TO BE FREE FROM ANODIZE

.370 .84 9.60

.250 DIA 82° CSK .442 DIA 8 PLACES

3.08 .115 4.93

.218 .222 DIA 5 PLACES (A .005 DIA)

.062 DIA 4 PLACES

(1) 21.375

.690 .686 3PLACES

.344 3PLACES .25 .01

1.32

2.64 1.37

.098 .106 DIA C'SK 100° .204 DIA 39 PLACES

.312 .314 4 PLACES

.344 4 PLACES

.10 .25

.25 R 8 PLACES .25

1.53 1.20 .10

.224

3.15 1.52

.78 2.37

1.45

(1) 5.250 BSC

.375 .556

DATUM PLANE A

1.687 1.844

.188 .192 DIA (1) THIS HOLE ONLY

.190 REF

(10)

(5) REF

.098 .106 DIA 16PLACES LOCATE PER FIND NO.4

.010 4PLACES

.479 REF 4PLACES

.252 1.09 REF .248

.30 REF 4PLACES

.062 R TYP

.09

.75 .70 .062 R 4PLACES

4.87 REF

5.43 REF

.015 R MAX

.32 .015 .190 .003

B .003

.63 .48 TYP

.90 TYP

.132 .128

SECTION A A
SCALE 2/1

4.02 REF

1.10 1.20

1.09 REF .062 R TYP

.30 .29

.09

.062 R 4PLACES

PARTIAL SECTION C-C

1.10 1.20

.062 R TYP

1.09 REF .30 .09

.062 R 4PLACES

PARTIAL SECTION B-B

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. ~~DIP BRAZE USING BRAZE ALLOY QQ-B-636 CLASS FB-BAL SI-C~~
3. LOCATE .106 DIA HOLES IN FIND NOS. 10, 11, 12, 13 PER FIND NO. 1. UNLESS OTHERWISE SPECIFIED, RIVET PER MIL-STD-403
4. 125/ FINISH UNLESS OTHERWISE SPECIFIED.
5. INSTALL FIND NO. 7 PER MS 33646, BREAK OFF DRIVING TANG
6. COAT THREADS AND FIND NO.7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
7. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 3 AND FIND NO. 14
8. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICD-MH01-00003
9. (1) (a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.
10. .188 .199 HOLE ℄ LOCATING DIM ARE OPTIONAL FOR MANUFACTURING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
1	1008150-5	PLATE	13
1	1008150-4	BRACKET	12
1	1008150-3	BRACKET	11
2	1008150-2	BRACKET	10
6	MS20426-AD3-10	RIVET CSK HD	9
19	MS20426-AD3-6	RIVET CSK HD	8
4	NF21229 CO415	INSERT SCREW LOCKING	7
14	MS20426-AD3-5	RIVET CSK HD	6
16	MS20470-AD3-4	RIVET UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-686C-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687C-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

1007161			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± .XXX .005 ANGLES ± 1° ± .XX .01
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINISH SEE NOTE 7

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS

DRAWN [illegible] DATE 7/16/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible] 9-24-63
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

END CONNECTOR BOTTOM PLATE (PSA END CONN)

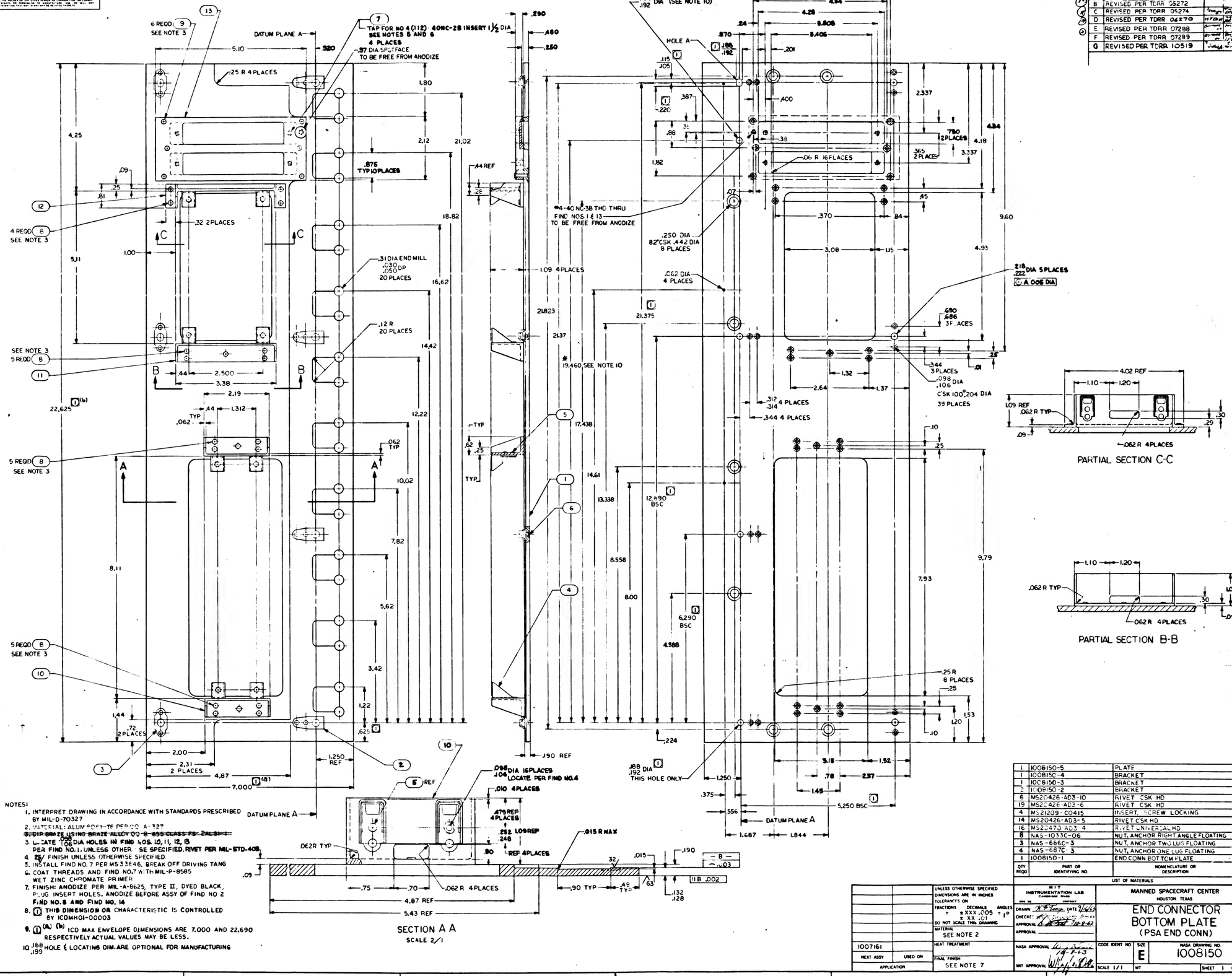
CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008150
SCALE 1/1 | WT | SHEET 1 OF 2

1008150

MASTER

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 01469		
B	REVISED PER TDRR 05272		
C	REVISED PER TDRR 05274		
D	REVISED PER TDRR 06270		
E	REVISED PER TDRR 07288		
F	REVISED PER TDRR 07289		
G	REVISED PER TDRR 10519		



SECTION A A
SCALE 2/1

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM ~~ASS1-TE~~ PER QQ-A-327
~~3. DIR 2007 LISTING BRAZE ALLOY QQ-B-655 CLASS FS-2AL3I~~
3. LOCATE .098 .106 DIA HOLES IN FIND NOS. 10, 11, 12, 13 PER FIND NO. 1. UNLESS OTHERWISE SPECIFIED. RIVET PER MIL-STD-40B
4. 25 FINISH UNLESS OTHERWISE SPECIFIED
5. INSTALL FIND NO. 7 PER MS 33646. BREAK OFF DRIVING TANG
6. COAT THREADS AND FIND NO. 7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
7. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 8 AND FIND NO. 14
8. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003
9. (1) (a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.
10. .188 .199 HOLE & LOCATING DIM. ARE OPTIONAL FOR MANUFACTURING

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
1	1008150-5	PLATE	13
1	1008150-4	BRACKET	12
1	1008150-3	BRACKET	11
2	1008150-2	BRACKET	10
6	MS20426-AD3-10	RIVET CSK HD	9
19	MS20426-AD3-6	RIVET CSK HD	8
4	MS21209-C0415	INSERT, SCREW LOCKING	7
14	MS20426-AD3-5	RIVET CSK HD	6
16	MS20470-AD3-4	RIVET UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-686C-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687C-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

LIST OF MATERIALS

1007161	
NEXT ASSY	USED ON
APPLICATION	

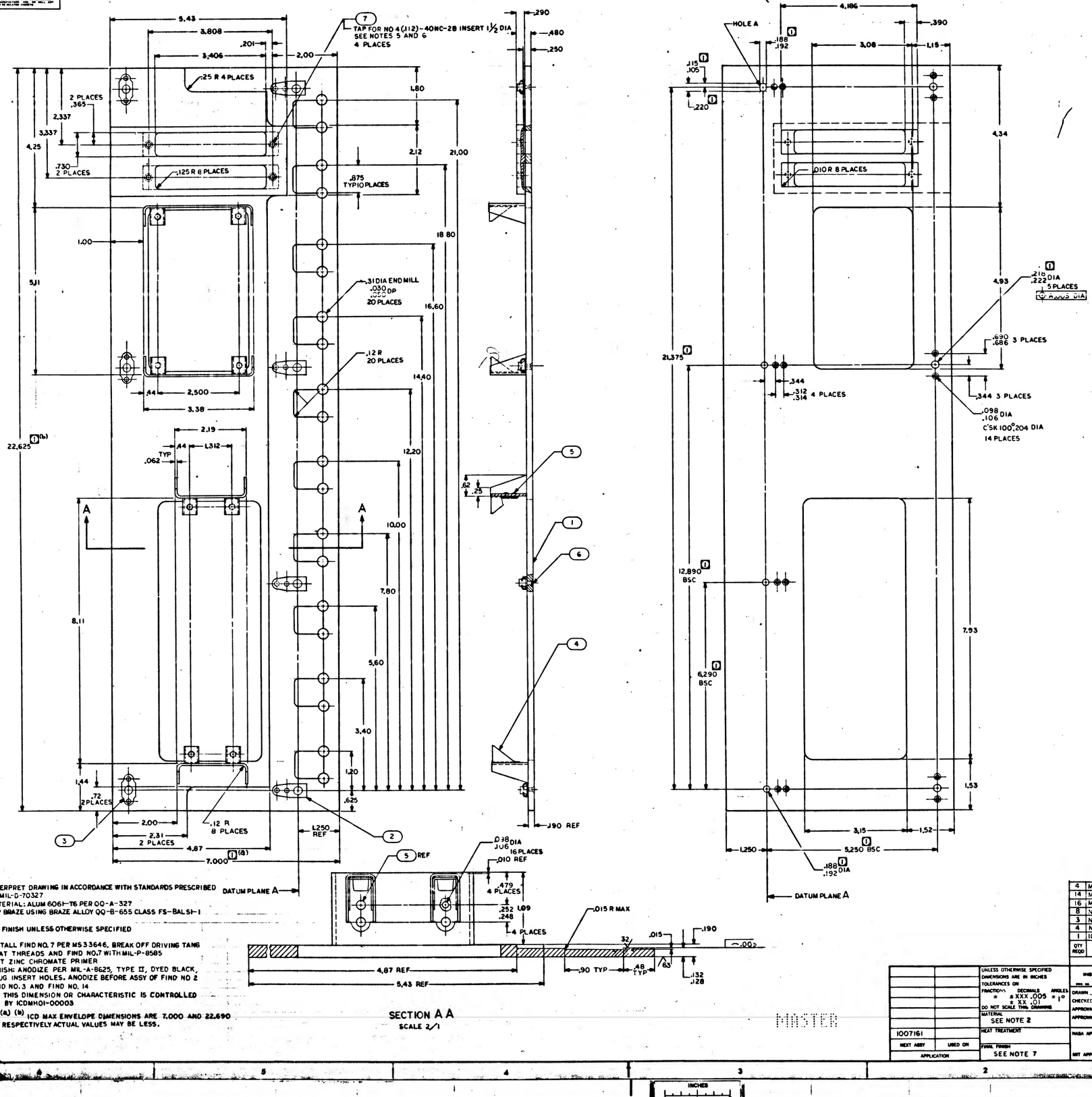
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± XXX .005 ANGLES ± 1°
± XX .01
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH SEE NOTE 7

M.I.T. INSTRUMENTATION LAB Cambridge Mass.
DRAWN [illegible] DATE 7/16/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible] 14-Aug-63
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

END CONNECTOR BOTTOM PLATE (PSA END CONN)

CODE IDENT NO | SIZE E | NASA DRAWING NO. 1008150
SCALE 1/1 | WT | SHEET 1 OF 1



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. DIP BRAZE USING BRAZE ALLOY QQ-B-655 CLASS FS-BALSI-1
4. 125 ▽ FINISH UNLESS OTHERWISE SPECIFIED
5. INSTALL FIND NO. 7 PER MS 33646, BREAK OFF DRIVING TANG
6. COAT THREADS AND FIND NO. 7 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
7. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK, PLUG INSERT HOLES. ANODIZE BEFORE ASSY OF FIND NO 2 FIND NO. 3 AND FIND NO. 14
8. (1) THIS DIMENSION OR CHARACTERISTIC IS CONTROLLED BY ICDMH01-00003
9. (1)(a) (b) ICD MAX ENVELOPE DIMENSIONS ARE 7.000 AND 22.690 RESPECTIVELY ACTUAL VALUES MAY BE LESS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	
4	MS21209-C0415	INSERT, SCREW LOCKING	7
14	MS20426-AD3-5	RIVET, CSK HD	6
16	MS20470-AD3-4	RIVET, UNIVERSAL HD	5
8	NAS-1033C-06	NUT, ANCHOR RIGHT ANGLE FLOATING	4
3	NAS-686-3	NUT, ANCHOR TWO LUG FLOATING	3
4	NAS-687-3	NUT, ANCHOR ONE LUG FLOATING	2
1	1008150-1	END CONN BOTTOM PLATE	1

1007161			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± .XXX .005 ANGLES ± 1°
± .XX .01
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH SEE NOTE 7

MIT INSTRUMENTATION LAB Cambridge, Mass.

DRAWN [illegible] DATE 2/14/63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

END CONNECTOR BOTTOM PLATE (PSA END CONN)

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008150
SCALE 1/1 | WT | SHEET 1 OF 1

MASTER

1008150

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS				
QPW	DESCRIPTION	DATE	APPROVAL	
A	REVISED PER TDRR 04459	03754		

A 1518001

4.00

E

D

3.725

4 PLACES

C

4.12

.015 R MAX

4.405

B

3.795

3 PLACES

G

4.45

1/8 x 3/4 SEE NOTE 8

SECTION E-E

SECTION D-D

SECTION C-C

SECTION B-B

.015 R MAX TYP

SECTION G-G
SAME AS SECTION B-B

DETAIL G
SCALE 4/1

SECTION F-F
SCALE 2/1

.44

4.550

8.540

4 SPACES AT .125 BSC
PITCH TOTAL .500 BSC

8 SPACES AT .125 BSC
PITCH TOTAL 1.000 BSC
5 PLACES

.12 x 45° CHAMFER

.25 x 45° CHAMFER

.25 TYP

.25 R TYP

8.400

4.150

.50 TYP

.250 DIA
.254
4 HOLES

.44

ALIGN KEES WITHIN 5° OF VERTICAL (LINE PARALELL TO BRACE ON OPPOSITE SIDE) BEFORE SEATING KEES 2 HOLES ONLY

5 SPACES AT .200 BSC
PITCH TOTAL 1.000 BSC
5 PLACES

.165 DIA THRU
.169
10-32 UNF-2B THRU
81° CSK TO
83°
.189 DIA 10 PLACES
.199
SEE NOTE 10

VIEW A-A

.912

9 SPACES AT .200 BSC
PITCH TOTAL 1.800 BSC

.015 R MAX TYP

1.112

5 SPACES AT .200 BSC
PITCH TOTAL 1.000 BSC
5 PLACES

1.312

.072 DIA
.073
⌖ .002 DIA
200 HOLES

.137 DIA
.139
⌖ .002 DIA
670 HOLES

.750
.752 TYP 10 PLACES

1.512

1.712

2.450 BSC

1.912

2.112

.576 BSC
10 PLACES

2.312

2.512

5 SPACES AT .200 BSC
PITCH TOTAL 1.000 BSC
5 PLACES

13 SPACES AT
.200 BSC PITCH
TOTAL 2.600 BSC

.312 BSC

2.712

21.588

19.388

17.188

14.988

12.788

10.588

8.388

6.188

3.988

1.275
10 PLACES

1.788

.010

.010 REF

.479 REF

.250

.098 DIA
.106
CSK 100° .204 DIA
8 HOLES

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
10	1000115-2	INSERT THREADED SELF LOCKING	5
6	1010670-5	NUT STAKE	4
8	MS 20426 AD3-5	RIVET CSK HEAD	3
4	NAS 1033C-3	NUT ANCHOR	2
1	1008151-1	FRONT PLATE	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±0°30'	NOTE 5
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
HEAT TREATMENT	
FINAL FINISH	SEE NOTE 6
NEXT ASSY	USED ON
APPLICATION	
1007161	

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE 5-12-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT PLATE
PSA END CONNECTOR

CODE IDENT NO. 80126 | SIZE J | NASA DRAWING NO. 1008151

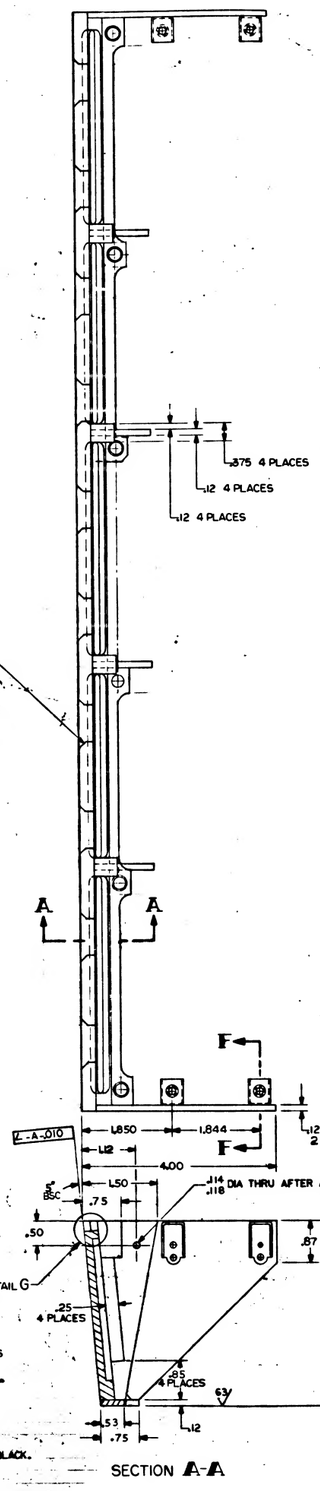
SCALE 1/1 | WT | SHEET 1 OF 1

1008151 A

MASTER

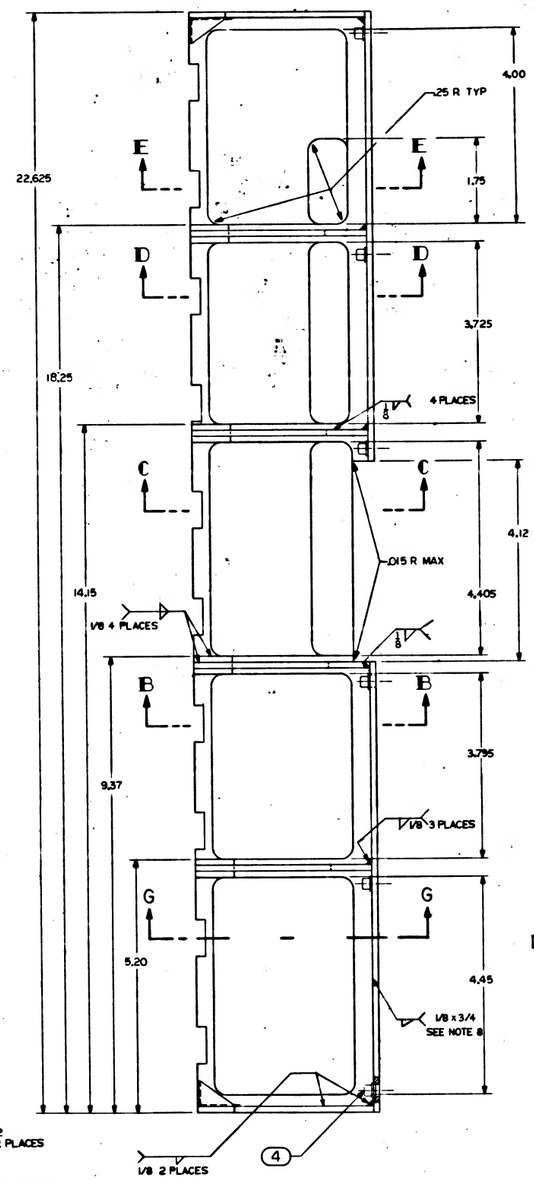
INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

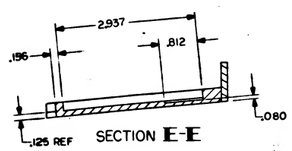
E2



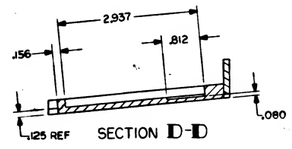
SECTION A-A

NOTES-
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327b
3. WELD PER MIL-W-8604
4. 125 FINISH UNLESS OTHERWISE SPECIFIED
5. TOLERENCES: 2 PLACE DECIMAL ± .010
   3 PLACE DECIMAL ± .005
6. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK. PLUG INSERT HOLES
7. ANODIZE BEFORE ASSEMBLY OF FIND NOS. 3 AND 5
8. FOUR SPACES CENTRALIZED BETWEEN GUSSETS
9. RIVET PER MIL-STD-403
10. INSTALL FIND NO. 5 PER ND502121

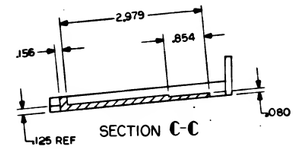




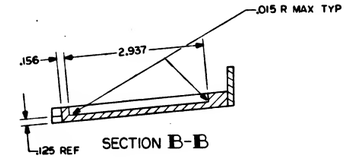
SECTION E-E



SECTION D-D

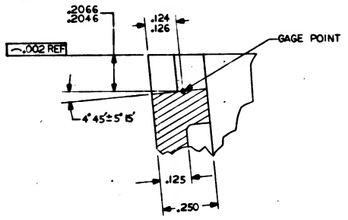


SECTION C-C

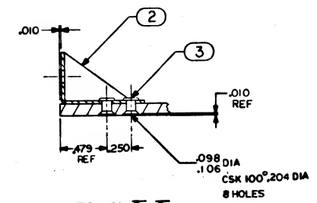


SECTION B-B

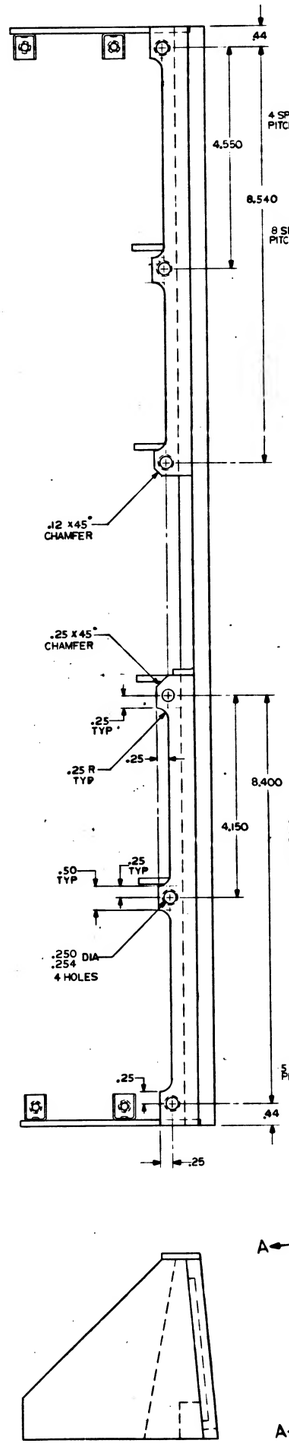
SECTION G-G
SAME AS SECTION B-B



DETAIL G
SCALE 4/1



SECTION F-F
SCALE 2/1



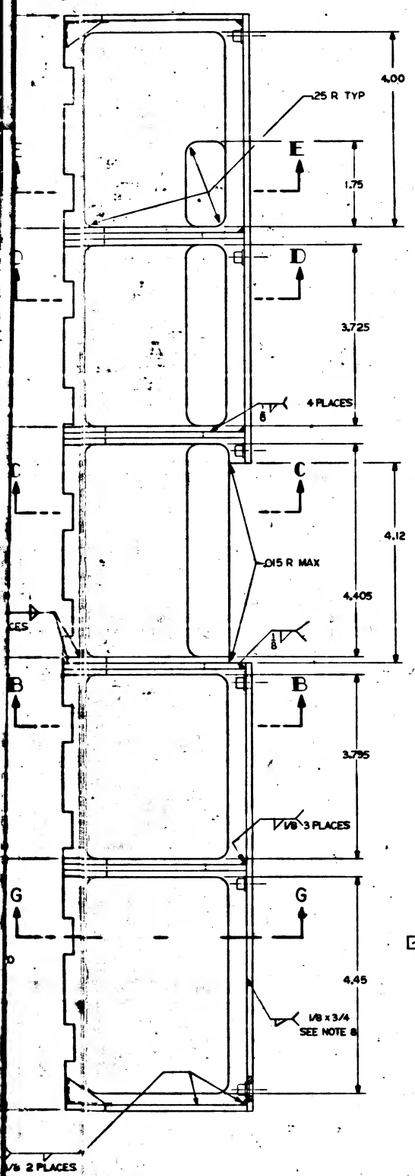
VIEW A-A

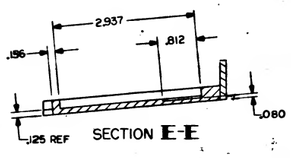
1008151 A

INCHES
PHOTOGRAPHIC SCALE ONLY

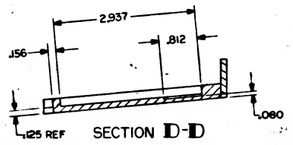
C 1518001

REVISIONS				23754
LTR	DESCRIPTION	DATE	APPROVED	
A	REVISED PER TDRR 04459	5/26/67	[illegible]	
B	REVISED PER TDRR 05270	7/24/67	[illegible]	
C	REVISED PER TDRR 05271	7/24/67	[illegible]	

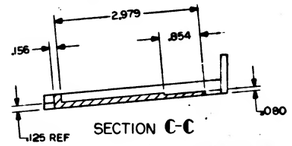




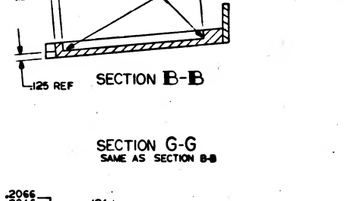
SECTION E-E



SECTION D-D

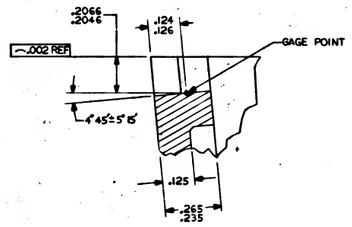


SECTION C-C

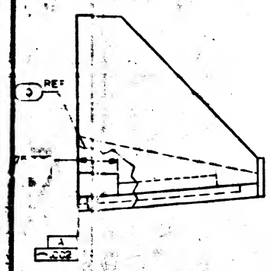


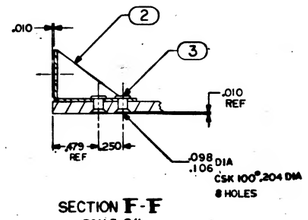
SECTION B-B

SECTION G-G
SAME AS SECTION B-B

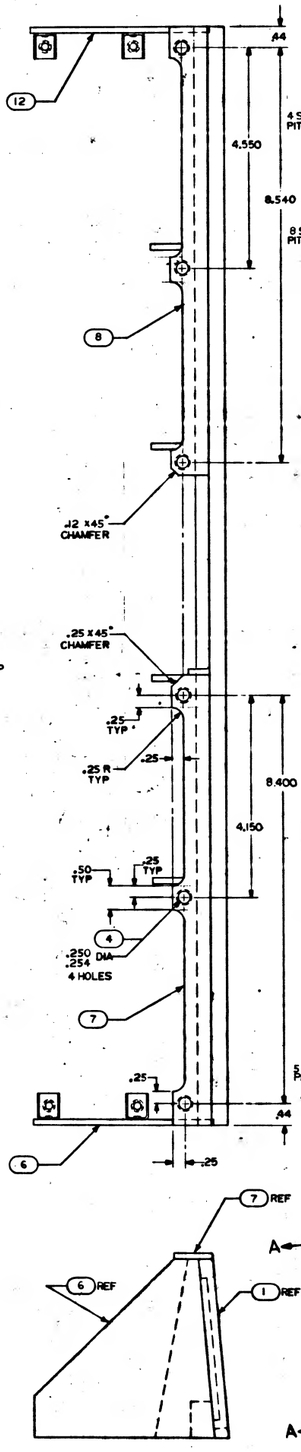


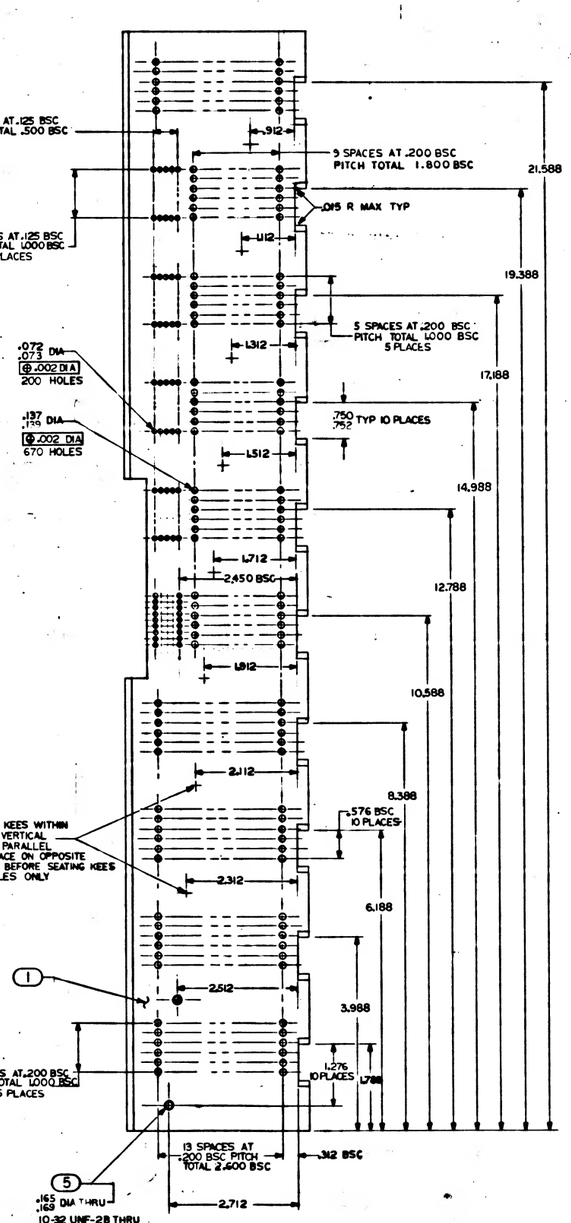
DETAIL G
SCALE 4/1





SECTION F-F
SCALE 2/1





VIEW A-A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
1	1008151 - 8	SIDE PLATE RIGHT	12
1	1008151 - 7	RIB	11
4	1008151 - 6	BLOCKS	10
3	1008151 - 5	RIB	9
1	1CC6151 - 4	TOP PLATE RIGHT	8
1	1008151 - 3	TOP PLATE LEFT	7
1	1008151 - 2	SIDE PLATE LEFT	6
10	1000115 - 2	INSERT THREADED SELF LOCKING	5
6	1010670 - 5	NUT STAKE	4
8	MS20426 AD3-5	RIVET CSK HEAD	3
4	NAS 1033C-3	NUT ANCHOR	2
1	1008151 - 1	FRONT PLATE	1

LIST OF MATERIALS

1007161			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±0°30'
SEE NOTE 5
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINAL FINISH
SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE 5-26-67
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

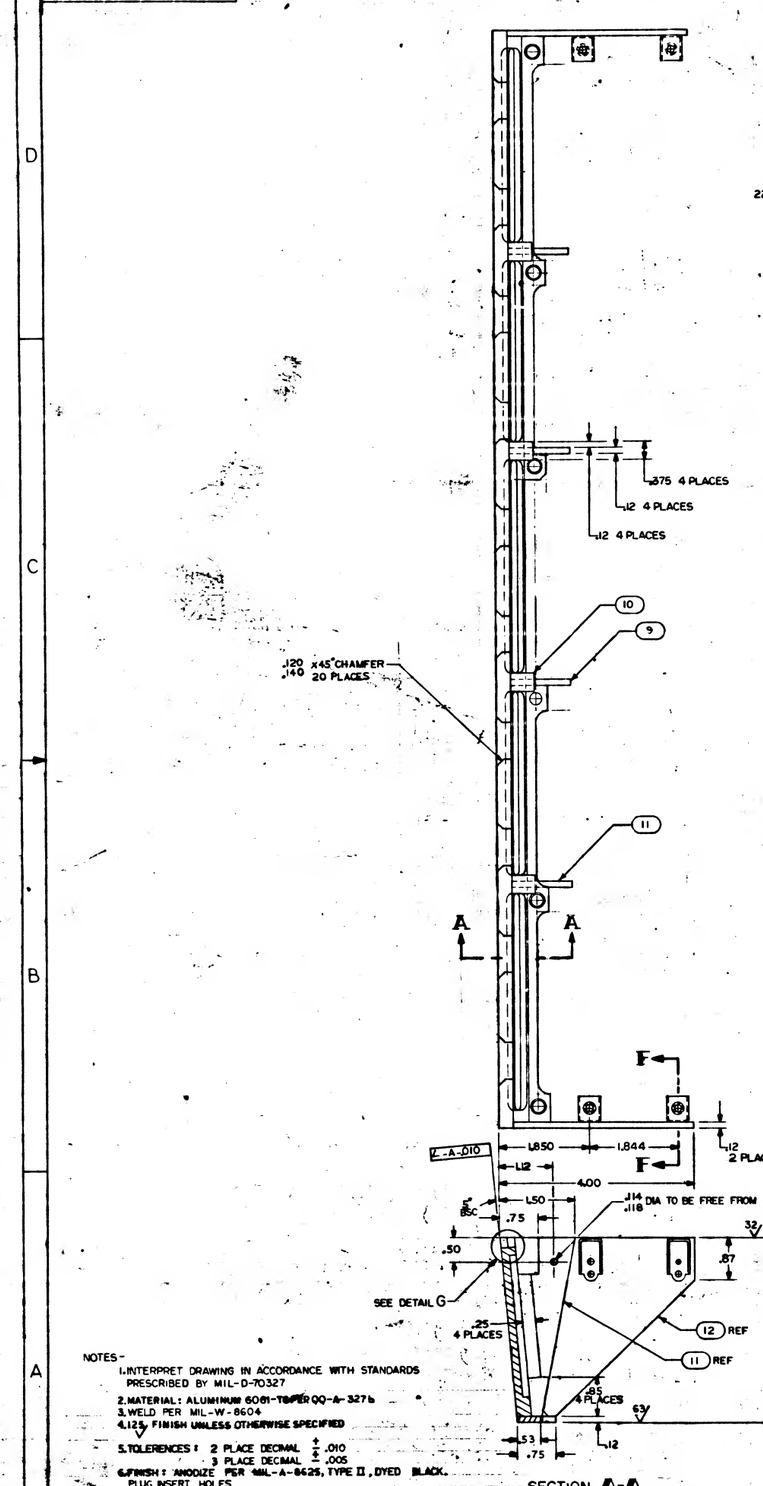
FRONT PLATE
PSA END CONNECTOR

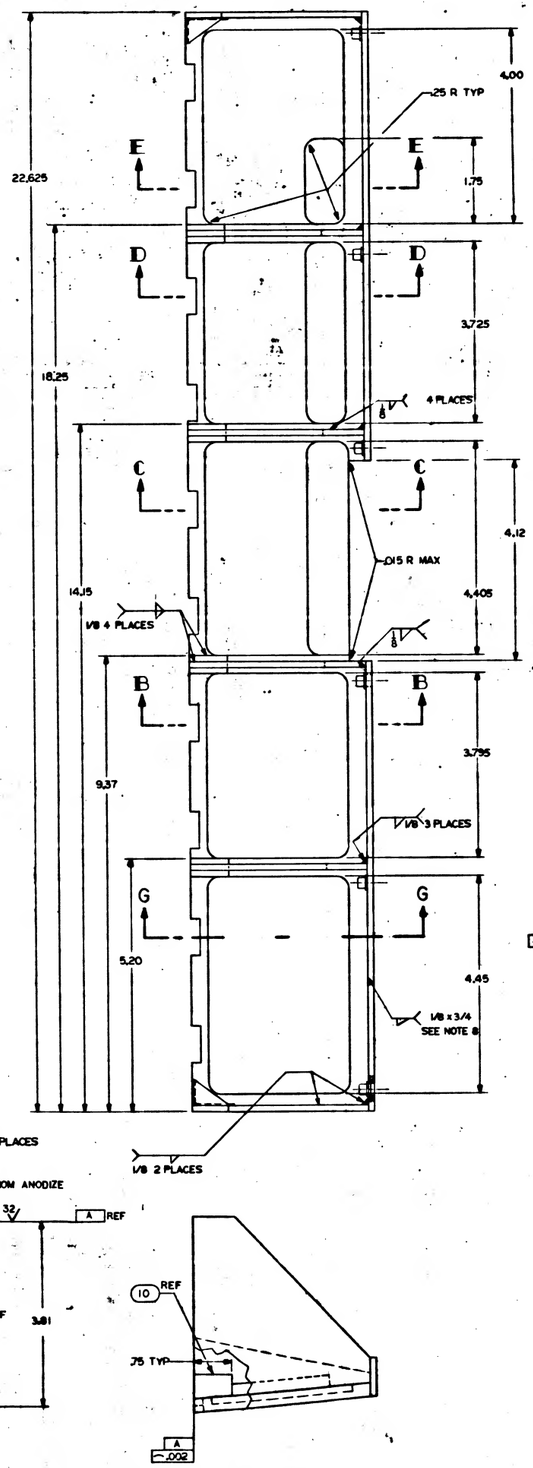
CODE IDENT NO. J | SIZE | NASA DRAWING NO 1008151
SCALE 1/1 | WT | SHEET 1 OF 1

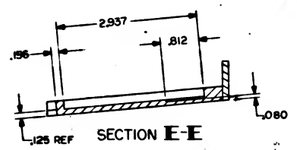
MASTER

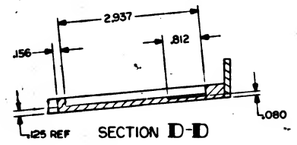
1008151 C

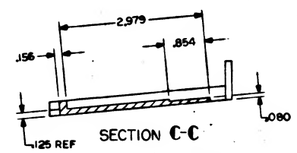
INCHES
PHOTOGRAPHIC SCALE ONLY

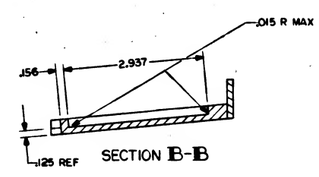




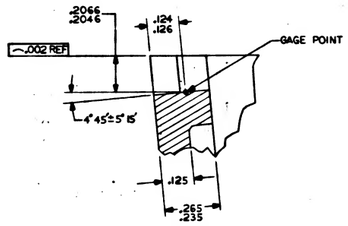




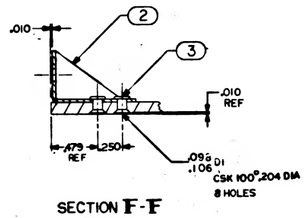




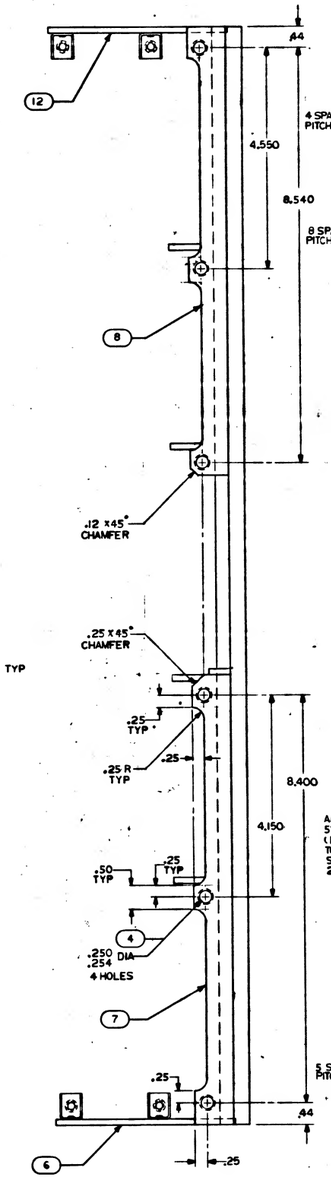
SECTION G-G
SAME AS SECTION B-B

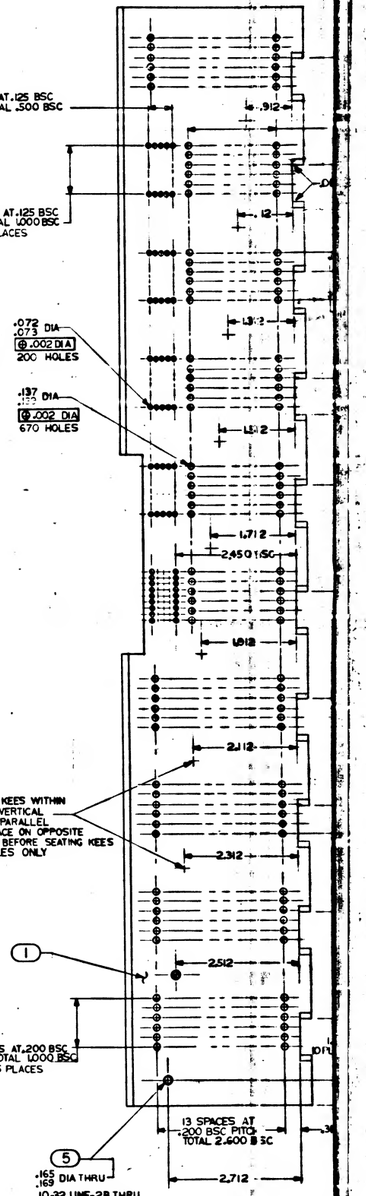


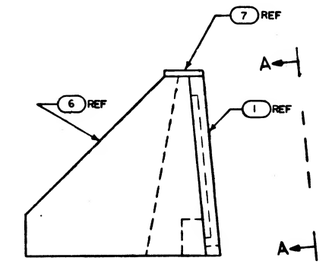
DETAIL G
SCALE 4/1



SECTION F-F
SCALE 2/1







VIEW A-A

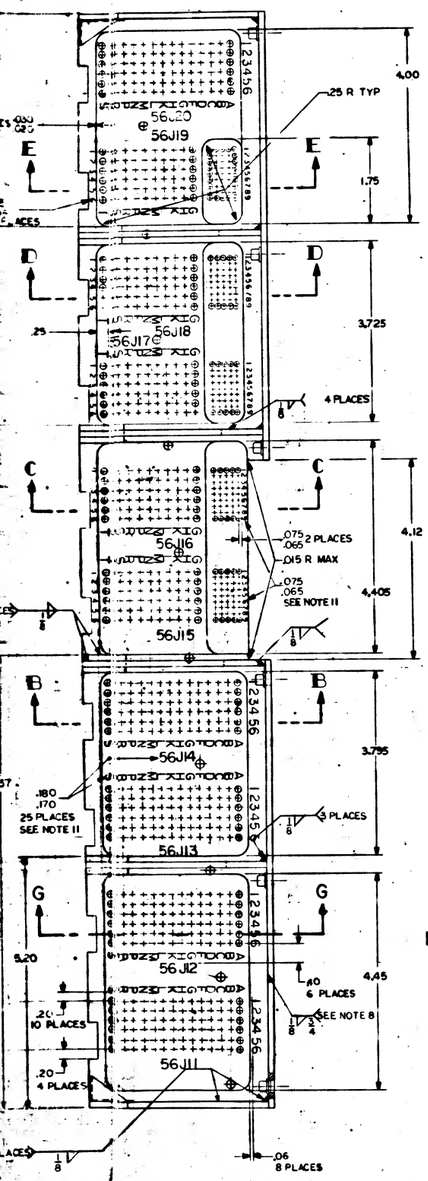
NOTES-
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327b
3. WELD PER MIL-W-8604
4. 125 FINISH UNLESS OTHERWISE SPECIFIED
5. TOLERENCES: 2 PLACE DECIMAL ± .010
3 PLACE DECIMAL ± .005
6. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK. PLUG INSERT HOLES
7. ANODIZE BEFORE ASSEMBLY OF FIND NO.2, 3 AND 5
8. FOUR SPACES CENTRALIZED BETWEEN GUSSETS
9. RIVET PER MIL-STD-403
10. INSTALL FIND NO.5 PER MD.J002121

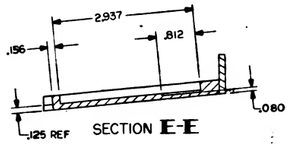
1008151 C

INCHES
PHOTOGRAPHIC SCALE ONLY

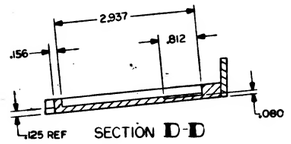
3 1918001

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04459	6/24/63	[illegible]
B	REVISED PER TDRR 05270	[illegible]	[illegible]
C	REVISED PER TDRR 05271	[illegible]	[illegible]
D	REVISED PER TDRR 06268	[illegible]	[illegible]
E	REVISED PER TDRR 06269	[illegible]	[illegible]

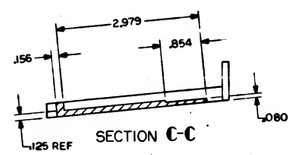




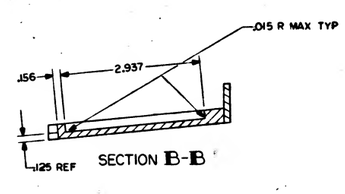
SECTION E-E



SECTION D-D

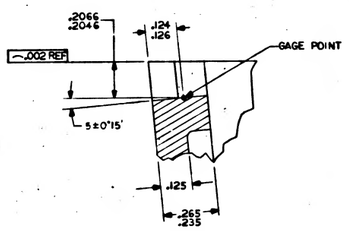


SECTION C-C

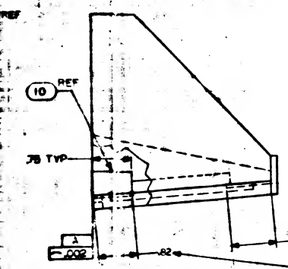


SECTION B-B

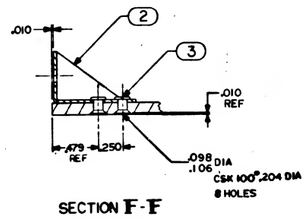
SECTION G-G
SAME AS SECTION B-B



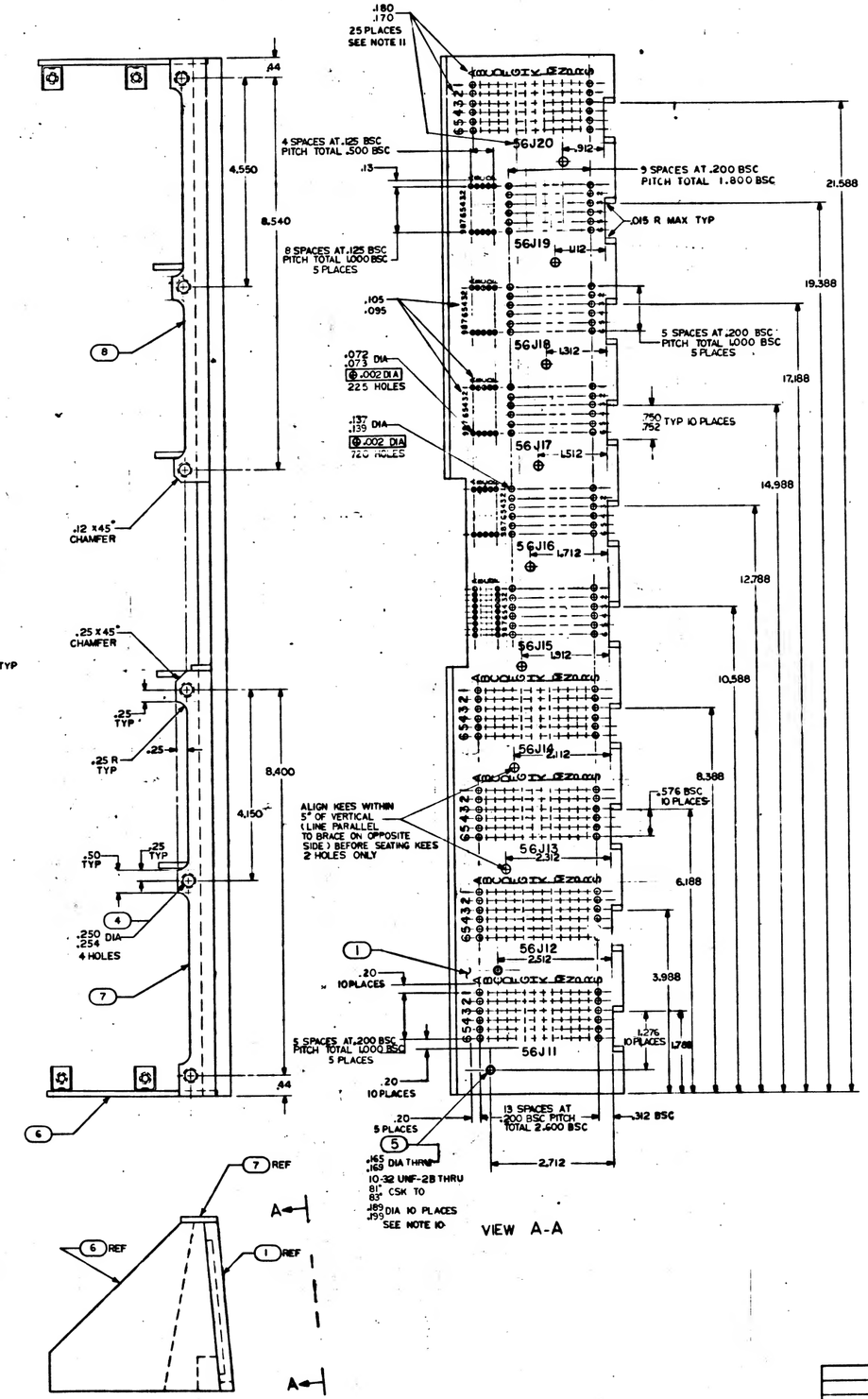
DETAIL G
SCALE 4/1



.12 WIDE .06 DEEP TONGUE AND FOR LOCATATION OF FIND NOS. 9 AND 10 OPTIONAL, FOR MANUFACTURING ONLY



SECTION F-F
SCALE 2/1



VIEW A-A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
1	1008151-8	SIDE PLATE RIGHT	12
1	1008151-7	RIB	11
4	1008151-6	BLOCKS	10
4	1008151-5	RIB	9
1	1008151-4	TOP PLATE RIGHT	8
1	1008151-3	TOP PLATE LEFT	7
2	1008151-2	SIDE PLATE RIGHT	6
10	1000115-2	INSERT THREADED SELF LOCKING	5
6	1010670-5	NUT STAKE	4
8	MS20426 AD3-5	RIVET CSK HEAD	3
4	NAS1033C-3	NUT ANCHOR	2
1	1008151-1	FRONT PLATE	1

LIST OF MATERIALS

1007161 NEXT ASSY	USED ON APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± SEE NOTE 5 DECIMALS ± ANGLES ±0°30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE 5-27-63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRONT PLATE
PSA END CONNECTOR

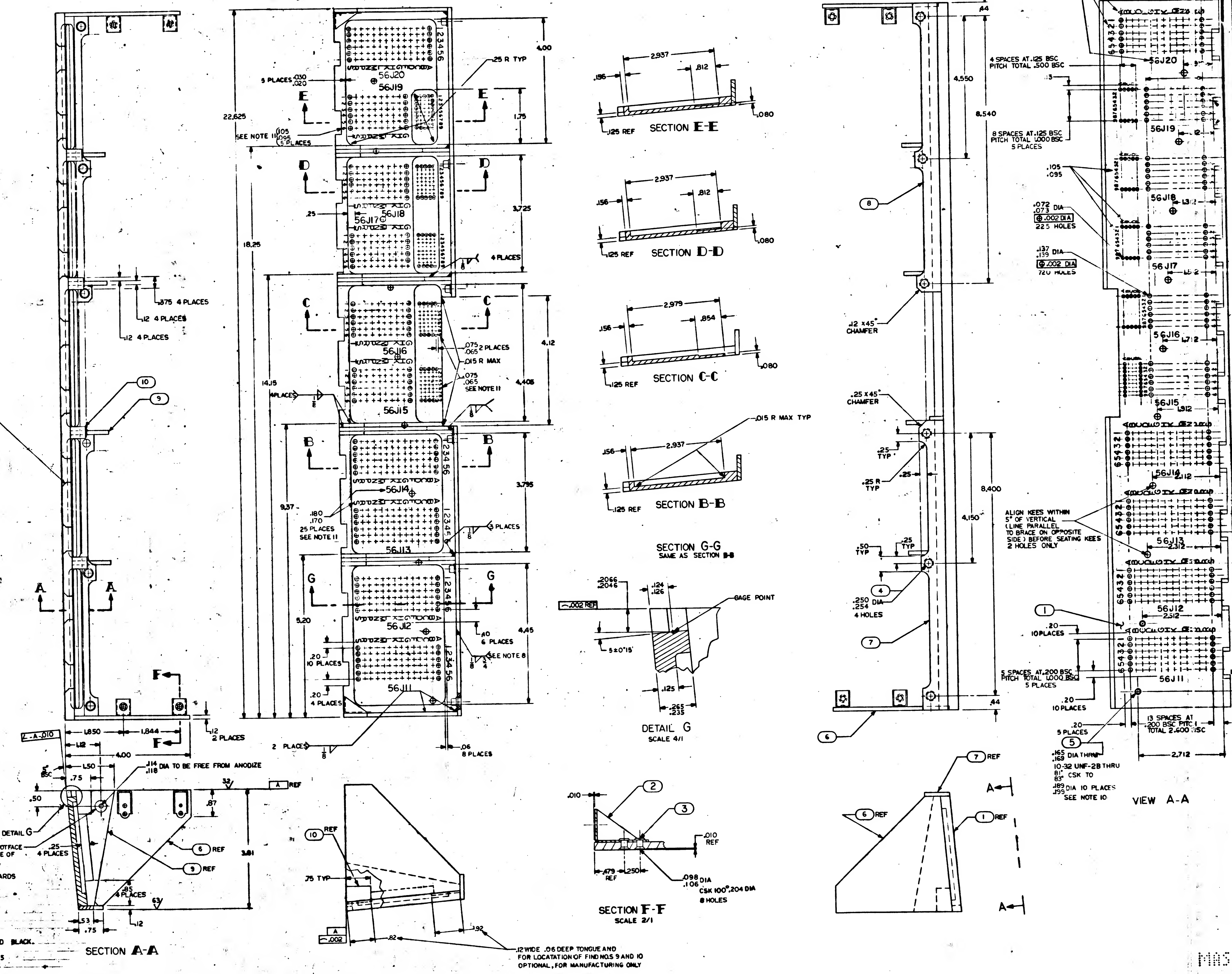
CODE IDENT NO. J
SIZE
NASA DRAWING NO. 1008151
SCALE 1/1
WT
SHEET 1 OF 1

MASTER

10 8151 E

INCHES PHOTOGRAPHIC SCALE ONLY

1008151 E



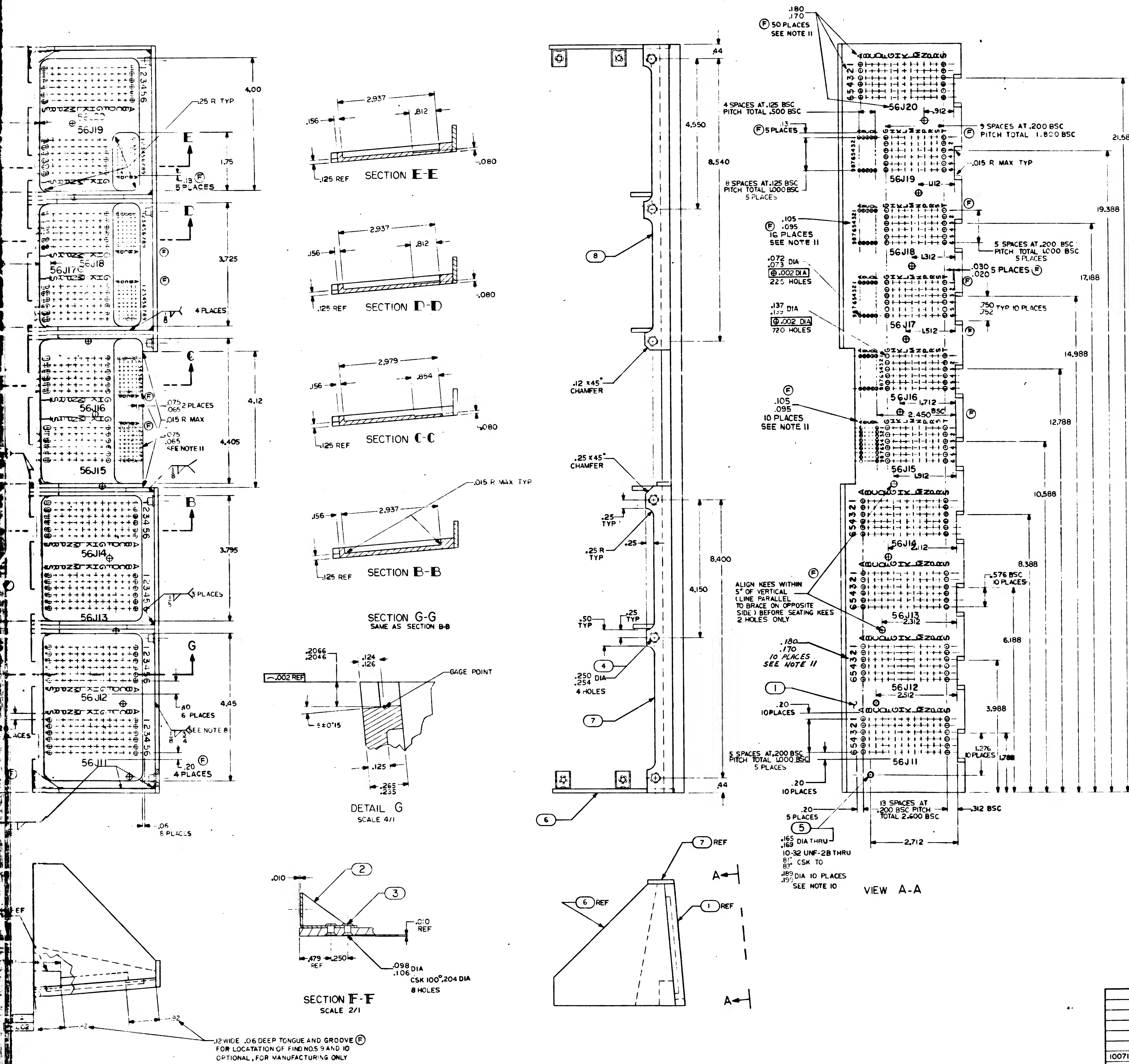
NOTES -
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327b
3. WELD PER MIL-W-8604
4. 125 FINISH UNLESS OTHERWISE SPECIFIED
5. TOLERENCES: 2 PLACE DECIMAL ± .010
3 PLACE DECIMAL ± .005
6. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK. PLUG INSERT HOLES
7. ANODIZE BEFORE ASSEMBLY OF FIND NO. 2, 3 AND 5
8. FOUR SPACES CENTRALIZED BETWEEN GUSSETS
9. RIVET PER MIL-STD-403
10. INSTALL FIND NO. 5 PER ND 1002121
11. MARK CHARACTERS AS SHOWN (WHITE) PER ND 1002023. UNLESS OTHERWISE SPECIFIED LOCATE CENTRALLY.

1008151 E

INCHES
PHOTOGRAPHIC SCALE ONLY

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 04459	5 Nov 63	
B	REVISED PER TDRR 05270	17 Dec 63	WK
C	REVISED PER TDRR 05271	17 Dec 63	WK
D	REVISED PER TDRR 06268	11 Feb 64	WK
E	REVISED PER TDRR 06269	11 Feb 64	WK
F	REVISED PER TDRR NO. 10535	15 JUL 64	JJJ / J.B.G.

1008151 F



1008151 F

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
~~1~~	~~1008151 – 8~~	~~SIDE PLATE RIGHT~~	~~12~~
~~1~~	~~1008151 – 7~~	~~RIB~~	~~11~~
4	1008151 – 6	BLOCKS	10
4	1008151 – 5	RIB	9
1	1008151 – 4	TOP PLATE RIGHT	8
1	1008151 – 3	TOP PLATE LEFT	7
2	1008151 – 2	SIDE PLATE ~~LEFT~~	6
10	1000115 – 2	INSERT THREADED SELF LOCKING	5
6	1010670-5	NUT STAKE	4
8	MS20426 AD3-5	RIVET CSK HEAD	3
4	NAS1033C-3	NUT ANCHOR	2
1	1008151-1	FRONT PLATE	1

LIST OF MATERIALS

1007161	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± SEE NOTE 5 ANGLES ±0°30'
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT
FINAL FINISH: SEE NOTE 6

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN: (signature) DATE 9-19-63
CHECKED: (signature)
APPROVAL: (signature)
APPROVAL
NASA APPROVAL: (signature) 10-8-63
MIT APPROVAL: (signature)

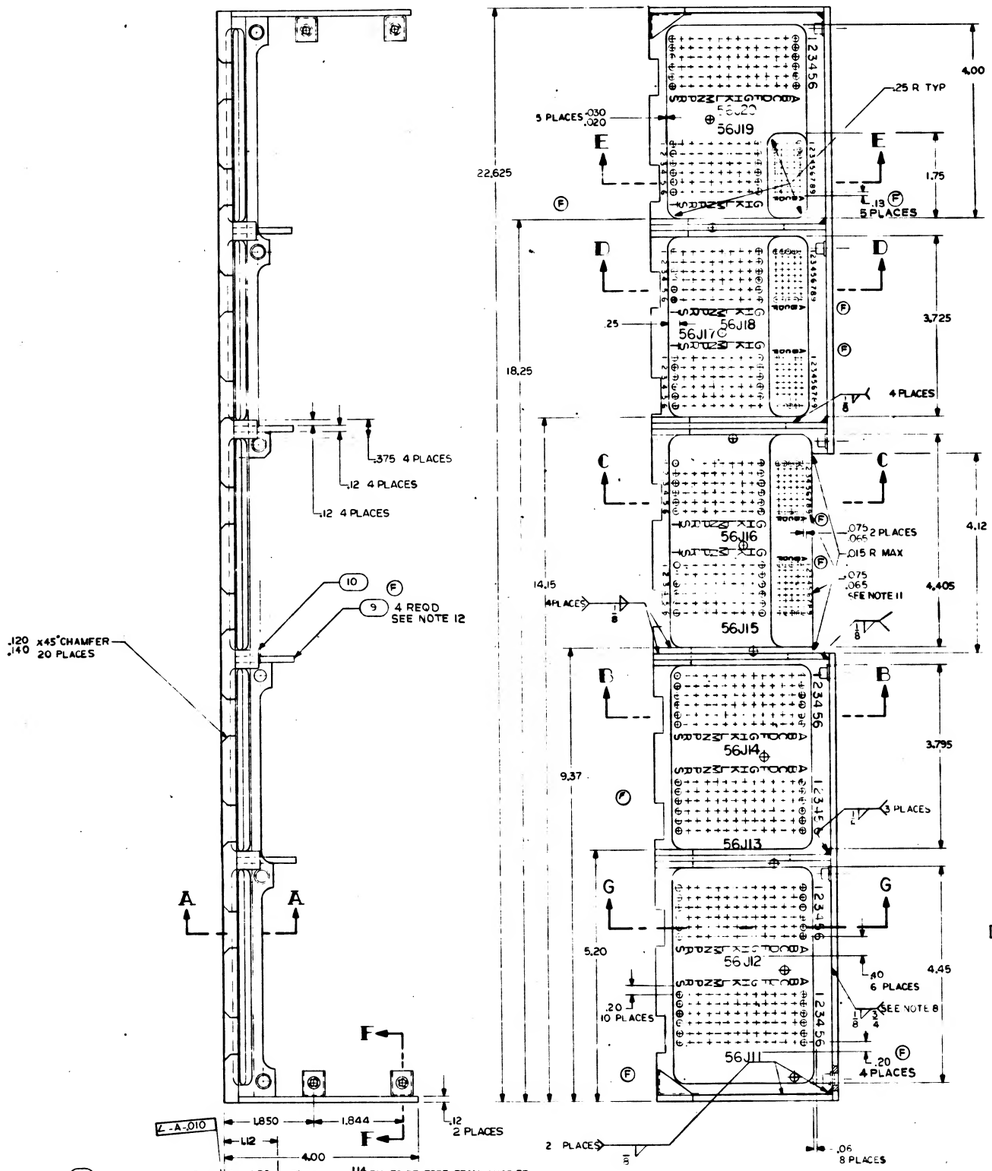
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRONT PLATE
PSA END CONNECTOR

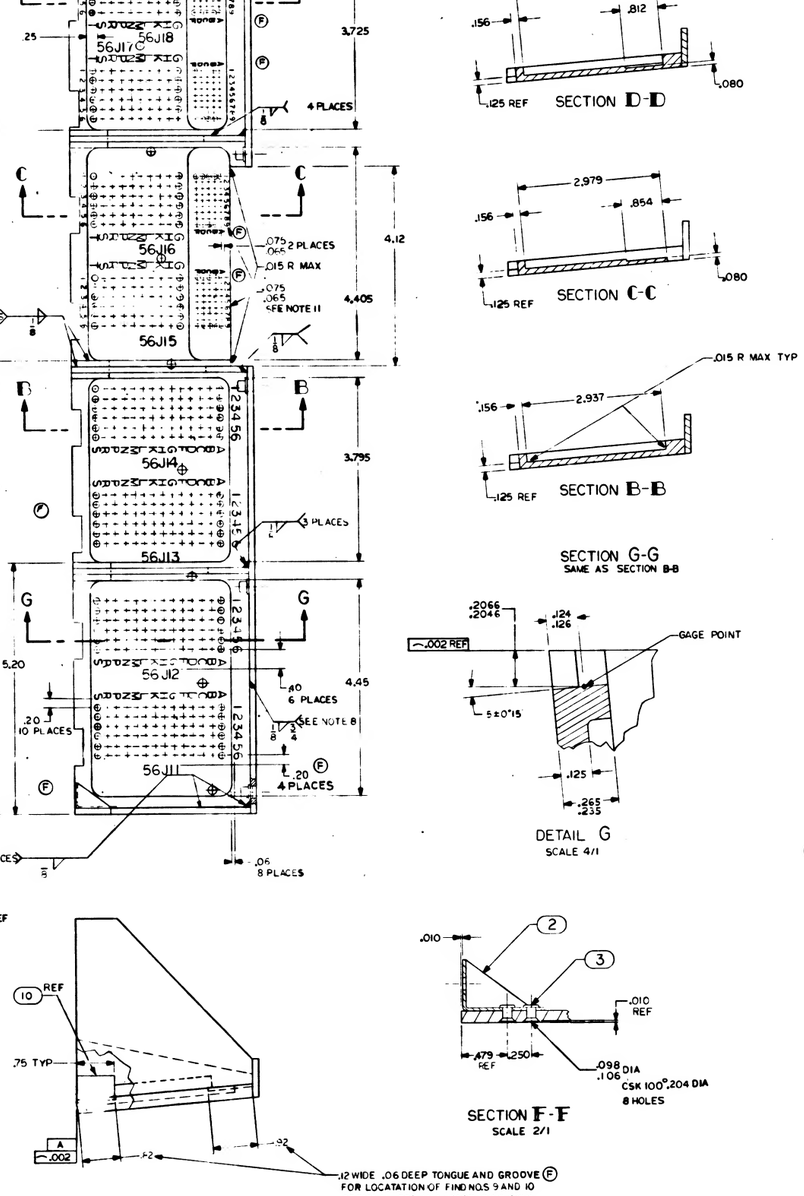
CODE IDENT NO. | SIZE: J | NASA DRAWING NO. 1008151
SCALE 1/1 | WT | SHEET 1 OF 1

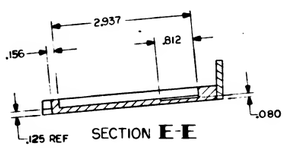
2H

2710008151



SECTION A-A





SECTION E-E

SECTION D-D

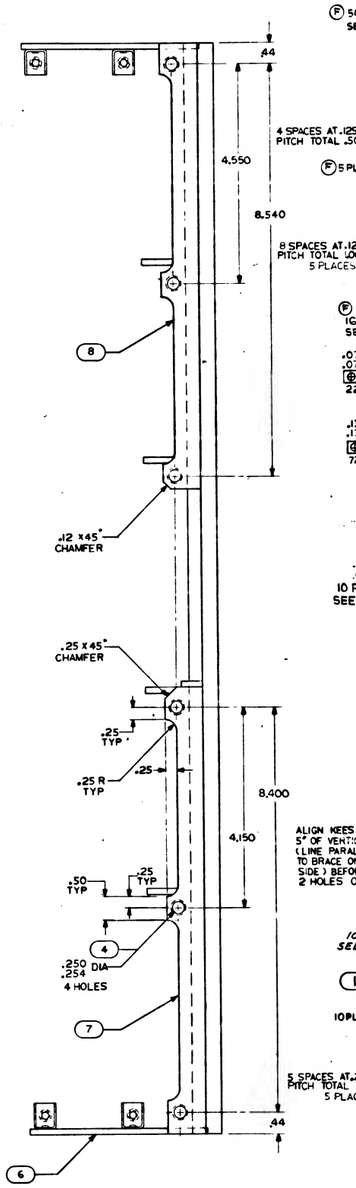
SECTION C-C

SECTION B-B

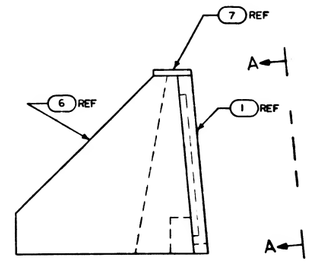
SECTION G-G
SAME AS SECTION B-B

DETAIL G
SCALE 4/1

SECTION F-F
SCALE 2/1



VIEW A-A



NOTES CONTINUED-

(F) 12. ALL EXTERNAL CORNERS OF ITEM (9) TO BE .015 MIN RADIUS OR CHAMFER.

(F) 13. UNLESS OTHERWISE SPECIFIED, ALL EXTERNAL CORNERS TO BE .005 TO .015 RADIUS OR CHAMFER.

NOTES-

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUMINUM 6061-T6 PER QQ-A-327b
3. WELD PER MIL-W-8604
4. 125 FINISH UNLESS OTHERWISE SPECIFIED
5. TOLERENCES: 2 PLACE DECIMAL ± .010
   3 PLACE DECIMAL ± .005
6. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK. PLUG INSERT HOLES
7. ANODIZE BEFORE ASSEMBLY OF FIND NO.2, 4 AND 5
8. FOUR SPACES CENTRALIZED BETWEEN GUSSETS
9. RIVET PER MIL-STD-403
10. INSTALL FIND NO.5 PER ND 1002121
(F) 11. MARK CHARACTERS AS SHOWN (WHITE (F)) PER ND 1002019. UNLESS OTHERWISE SPECIFIED LOCATE CENTRALLY.

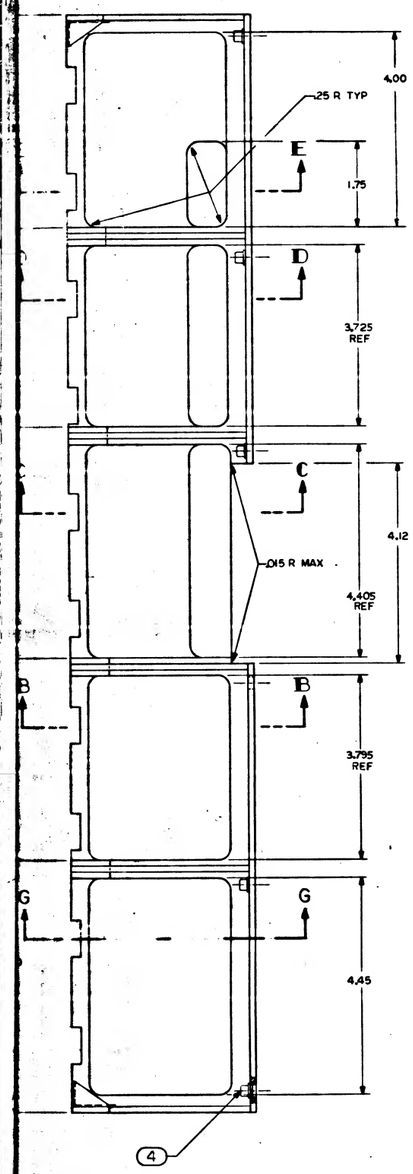
1008151 F

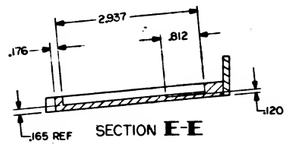
17100815-1

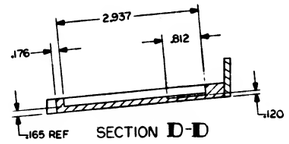
1918001

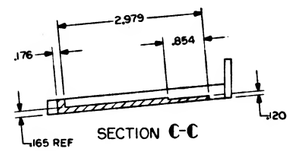
REVISIONS 03759

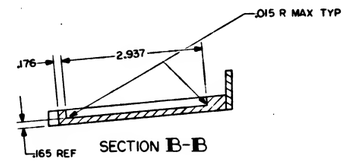
QTY	DESCRIPTION	DATE	APPROVAL



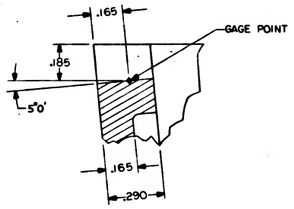




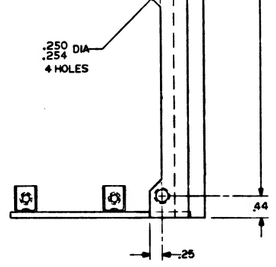


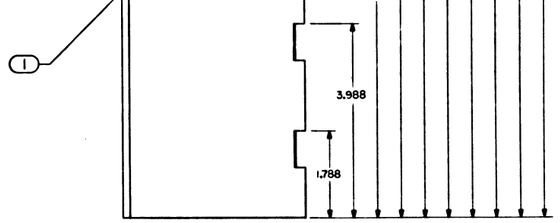


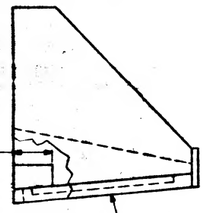
SECTION G-G
SAME AS SECTION B-B

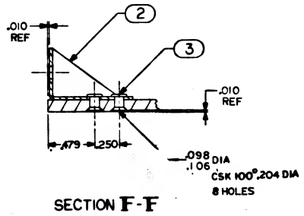


DETAIL G
SCALE 4/1

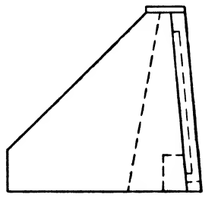


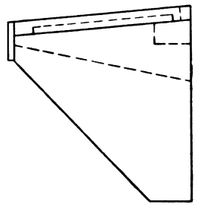






SECTION F-F
SCALE 2/1





QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
6	1010670-5	NUT STAKE	4
8	MS20426 AD3-5	RIVET CSK HEAD	3
4	NAS1033C-3	NUT ANCHOR	2
1	1008151-1	FRONT PLATE	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± .030 ANGLES ± SEE NOTE 5 DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
HEAT TREATMENT	
FINAL FINISH	SEE NOTE 6
1007161 NEXT ASSY	USED ON APPLICATION

MIT INSTRUMENTATION LAB Commonwealth of Massachusetts

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

DRAWN [signature] DATE 8-22-63
CHECKED R.P. Hodgson 8-22-63
APPROVAL A. Bertrand 8-22-63
APPROVAL
NASA APPROVAL [signature] 8-22-63
MIT APPROVAL [signature] 8-22-63

FRONT PLATE
PSA END CONNECTOR

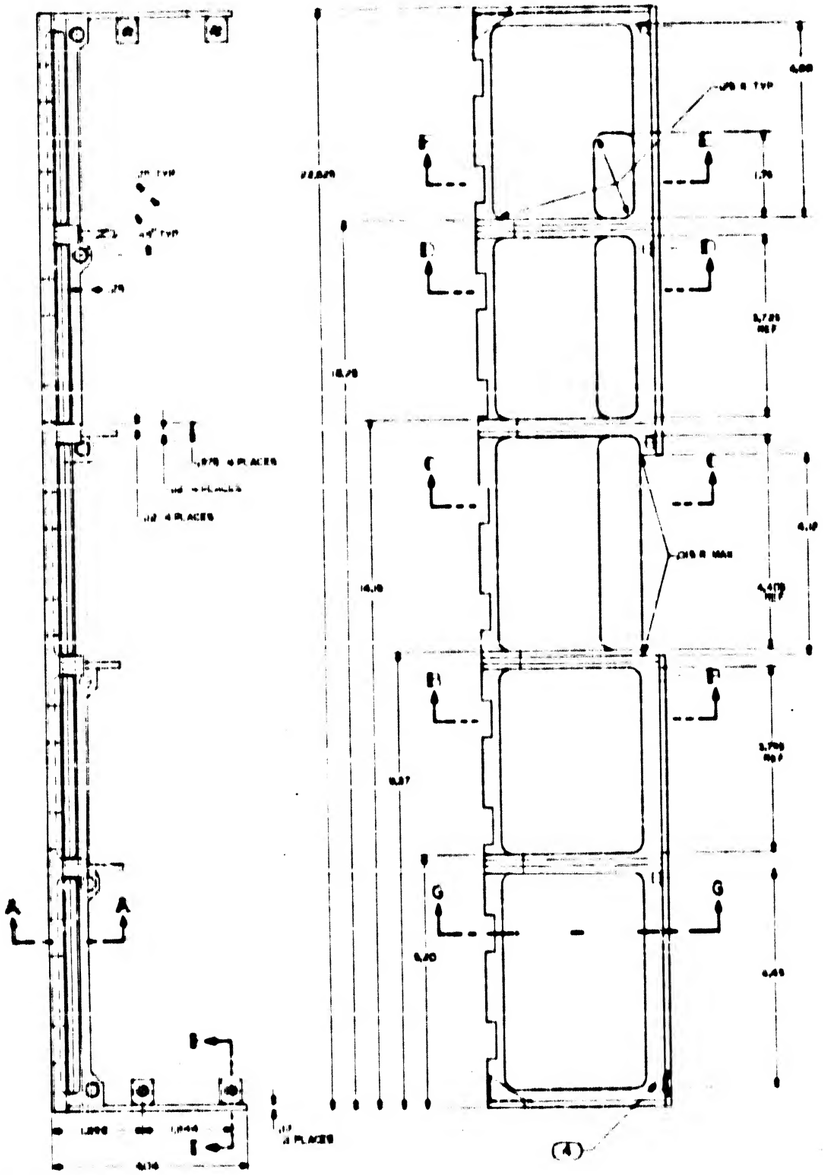
CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008151
SCALE 1/1 | WT | SHEET | OF

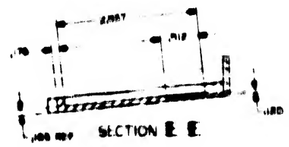
MASTER

1008151

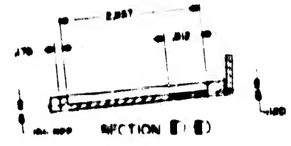
INCHES
0
PHOTOGRAPHIC SCALE ONLY

E2

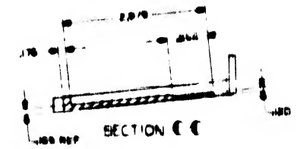




SECTION E E

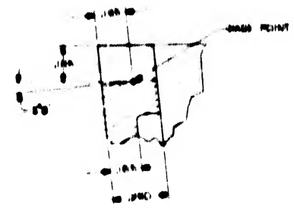


SECTION F F

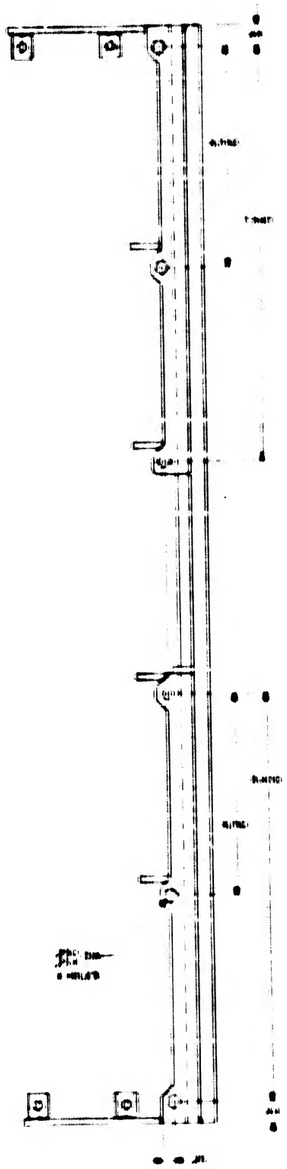


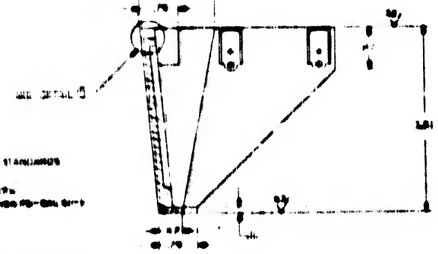
SECTION H H

SECTION G G

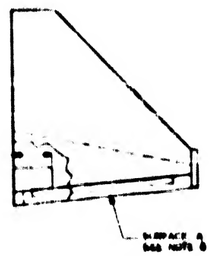


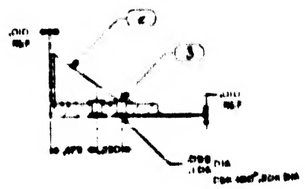
DETAIL G



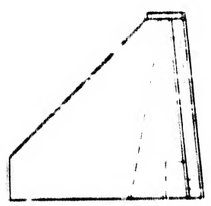


SECTION A A





SECTION F F



100815

1008152

REVISIONS TDRR 03316				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
	A	REVISED PER TDRR 03944	10-10-63	JJM

DIODES IDENTIFIED BY THIS DRAWING SHALL MEET
ALL THE REQUIREMENTS OF 1010259 AND ND 1002199.

MASTER

QTY. REQD.	NOMENCLATURE OR DESCRIPTION	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTES	FIND NO.

LIST OF PARTS AND MATERIALS

		UNLESS OTHERWISE SPECIFIED
		DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES
		DO NOT SCALE THIS DRAWING
1007007		MATERIAL:
NEXT ASSY	USED ON	
APPLICATION		

MIT INSTRUMENTATION LAB
CONTRACT NAS 9-153

		DATE
APPROVED	J. B. Test	9/23/63
CHECKED		
DRAWN		
APPROVED FOR MSC	W. J. Dominick	9/15/63
MIT/IL APPROVAL	L Kalyd	7/24/63

DIODE, PVR

SCALE	UNIT WT.	CODE IDENT.

MIT INSTRUMENTATION LABORATORY
CAMBRIDGE, MASS.

DWG. NO.

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

NASA DRAWING NO.
1008152

SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008152

REVISIONS TDRR 0331 6				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL

DIODES IDENTIFIED BY THIS DRAWING SHALL MEET
ALL THE REQUIREMENTS OF 1010256 AND ND 1002199.

MASTER

QTY. REQD	NOMENCLATURE OR DESCRIPTION	PART OR IDENTIFYING NO.	SPECIFICATION	MATERIAL OR NOTES	FIND NO.

LIST OF PARTS AND MATERIALS

		UNLESS OTHERWISE SPECIFIED
		DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES
		DO NOT SCALE THIS DRAWING
1007002		MATERIAL:
NEXT ASSY	USED ON	
APPLICATION		

MIT INSTRUMENTATION LAB
CONTRACT NAS 9-153

		DATE
APPROVED	R. Burtt	9/23/63
CHECKED		
DRAWN		
APPROVED FOR MSC		
MIT/IL APPROVAL		DATE
	L Kalyl	9/26/63

DIODE, PVR

SCALE	UNIT WT.	CODE IDENT.

MIT INSTRUMENTATION LABORATORY
CAMBRIDGE, MASS.

DWG. NO.

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

NASA DRAWING NO.
1008152

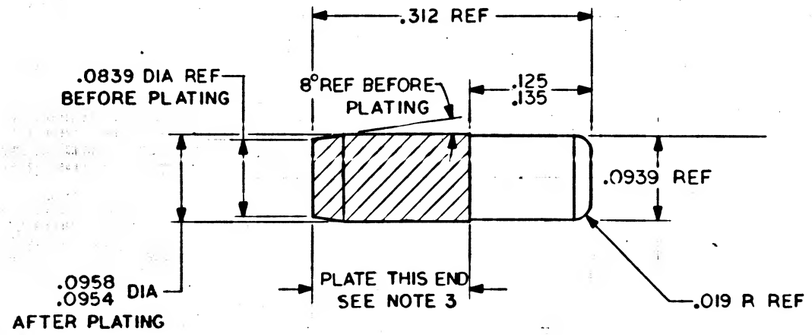
SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008153

REVISIONS 03754			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: PIN, STRAIGHT, HEADLESS (DOWEL) PER MS16555-17
3. ELECTROLESS NICKEL PLATE INDICATED SURFACES PER MIL-C-26074A, CLASS I

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007161	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

HEAT TREATMENT:

FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN J. Fidgeon DATE 4 SEPT 63
CHECKED R.R. Ramsbottom 10-8-63
APPROVAL D. Robert 10-8-63
APPROVAL

NASA APPROVAL W.J. Rhine 10-9-63
MIT APPROVAL W. Tupper Dotts

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PIN, STEP

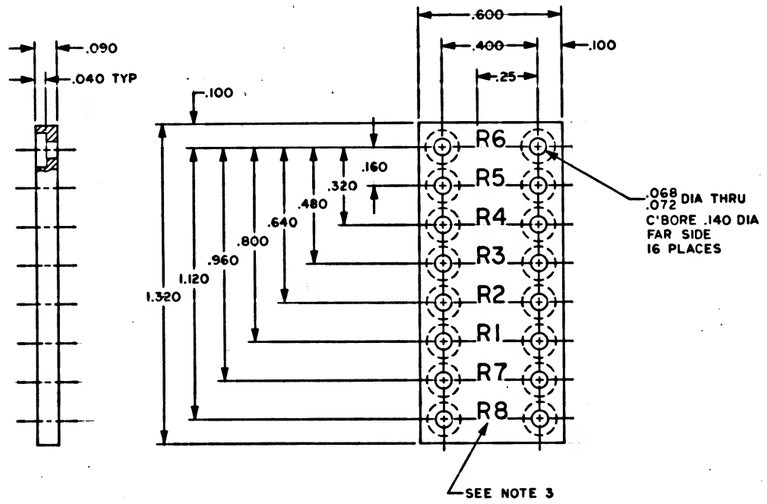
CODE IDENT NO.
SIZE C
NASA DRAWING NO. 1008153
SCALE 10/1
WT
SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

1008153

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA, IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS TORR 03775			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .090 THICK GLASS EPOXY PER ND 1002135
3. MARK .080 / .060 HIGH BLACK PER ND 1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007098	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX±.02 XXX±.005 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS
DWG. NO. CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN Ken Hopkins DATE 3-20-63
CHECKED L. Kingsbury #0768
APPROVAL D. A. Scott 10-9-63
APPROVAL

TERMINAL BOARD, BUFFER RESISTORS TRAY 5

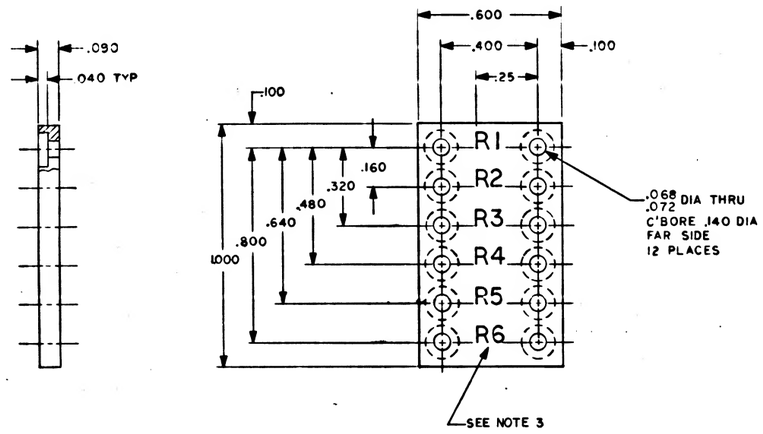
NASA APPROVAL W. J. Klein 10-9-63
MIT APPROVAL W. Hopkins 10-9-63

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008154
SCALE 4/1	WT	SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .090 THICK GLASS EPOXY PER ND 1002135
3. MARK .080 / .060 HIGH PER ND 1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007111		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 XXX ±.005 ANGLES ± DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DWG. NO. CONTRACT — MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON	MATERIAL SEE NOTE 2	DRAWN Tony Gill DATE 8-9-63
APPLICATION		HEAT TREATMENT	CHECKED R.L. Hanny 7-26-63
		FINAL FINISH	APPROVAL D.A. Stott 10-2-63
			APPROVAL
			NASA APPROVAL W.J. Peters 11-10-63
			MIT APPROVAL W.W. Coffin 8-29-63

TERMINAL BOARD, BUFFER RESISTORS TRAY 6

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008156
SCALE 4/1	WT	SHEET 1 OF 1

1008156

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

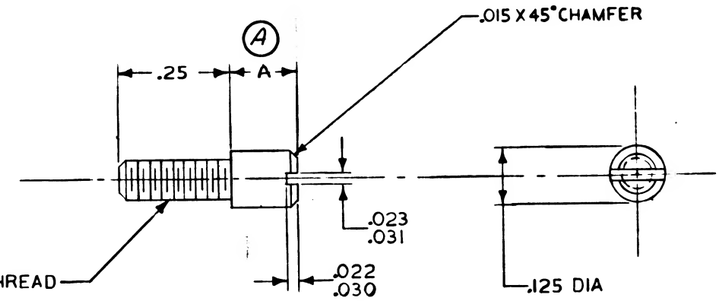
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

A	1918001		

REVISIONS TDRR 04449

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11353	12 AUG 69	JWP

PART NO.	"A" DIM.
1008161-1	.125
-2	.151
-3	.180



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D 70327
2. MATERIAL: TYPE I NYLON PER MIL-P-17091
3. FINISH: 125/ ALL OVER UNLESS OTHERWISE SPECIFIED
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .000/.015
5. SCREW SHALL BE THREADED AS CLOSE TO HEAD AS PRACTICABLE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX±.02 XXX±.005 ANGLES ± 2°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO ____ CONTRACT ____
DRAWN J F Walsh DATE 11-4-63
CHECKED ____
APPROVAL P J Swislak 11-4-63
APPROVAL D. R. Test 11-5-63
NASA APPROVAL ____
MIT APPROVAL W K Luffer 5 NOV 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SCREW, CAP SLOTTED HEAD, SPECIAL

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008161

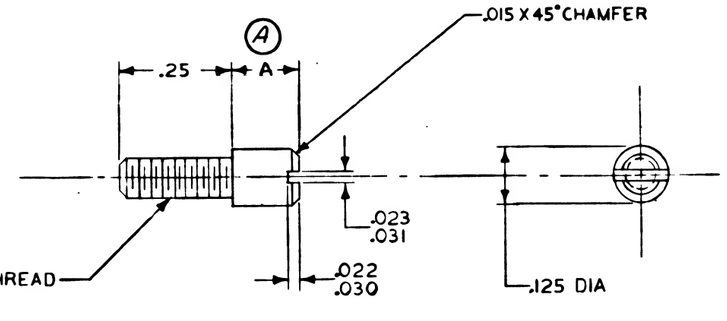
SCALE 5/1 WT SHEET 1 OF 1

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

B 1918001

REVISIONS TDRR 04491			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11353	12 AUG 64	JWP
B	REVISED PER TDRR 13096	6 OCT 64	JWD

PART NO.	"A" DIM.
1008161-1	.125
-2	.151
-3	.180



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D 70327
2. MATERIAL: TYPE I NYLON PER MIL-P-17091
3. FINISH: 125 ALL OVER UNLESS OTHERWISE SPECIFIED
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .000/.015
5. SCREW SHALL BE THREADED AS CLOSE TO HEAD AS PRACTICABLE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± | DECIMALS XX±.02 XXX±.005 | ANGLES ± 2°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. | CONTRACT
DRAWN J F Walsh DATE 11-4-63
CHECKED
APPROVAL E J Sirdak 11-4-63
APPROVAL D. R. Trent 11-5-63
NASA APPROVAL
MIT APPROVAL W K Kaufman 5 NOV 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SCREW, CAP SLOTTED HEAD, SPECIAL

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008161

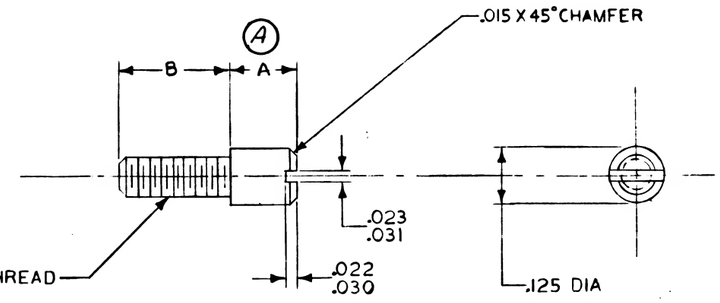
SCALE 5/1 | WT | SHEET 1 OF 1

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY, NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

SYM	DESCRIPTION	DATE	APPROVAL
	REVISIONS TDRR 04449		
A	REVISED PER TDRR 11353	12 AUG 64	JWP
(M) B	REVISED PER TDRR 13096	6 OCT 64	JWP
(M) C	REVISED PER TDRR 18512	23 APR 65	JWP

D 1918001

PART NO.	"A" DIM.	"B" DIM.
1008161-1	.125	.25
-2	.151	.25
-3	.180	.25
-4	.125	.13



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D 70327
2. MATERIAL: TYPE I NYLON PER MIL-P-17091
3. FINISH: 125 ALL OVER UNLESS OTHERWISE SPECIFIED
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .000/.015
5. SCREW SHALL BE THREADED AS CLOSE TO HEAD AS PRACTICABLE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 XXX ± .005 ANGLES ± 2°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO — CONTRACT
DRAWN J F Walsh DATE 11-4-63
CHECKED
APPROVAL C J Sudduth 11-4-63
APPROVAL for R. Trost 11-5-63
NASA APPROVAL
MIT APPROVAL W H Hoffman 5 Nov 63

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

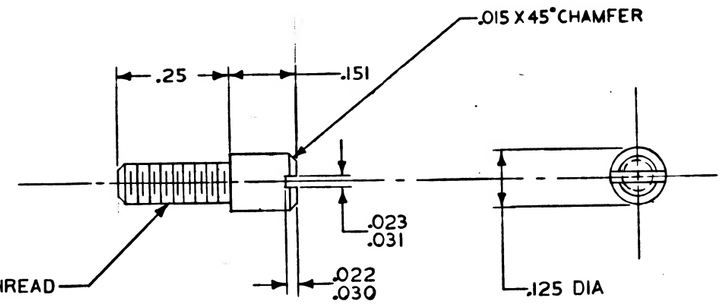
SCREW, CAP SLOTTED HEAD, SPECIAL

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008161
SCALE 5/1	WT	SHEET 1 OF 1

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1918001

REVISIONS TPAR 04491			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL D 70327
2. MATERIAL: TYPE I NYLON PER MIL-P-17091
3. FINISH: 125 ALL OVER UNLESS OTHERWISE SPECIFIED
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .000/.015
5. SCREW SHALL BE THREADED AS CLOSE TO HEAD AS PRACTICABLE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± | DECIMALS XX±.02 XXX±.005 | ANGLES ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

HEAT TREATMENT:

FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. | CONTRACT

DRAWN J.F. Walsh DATE 11-4-63
CHECKED
APPROVAL P.J. Swiniarski 11-4-63
APPROVAL D.R. Tent 11-5-63
NASA APPROVAL
MIT APPROVAL W.W. Hyde 5 Nov 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SCREW, CAP SLOTTED HEAD, SPECIAL

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008161
SCALE 5/1	WT	SHEET 1 OF 1

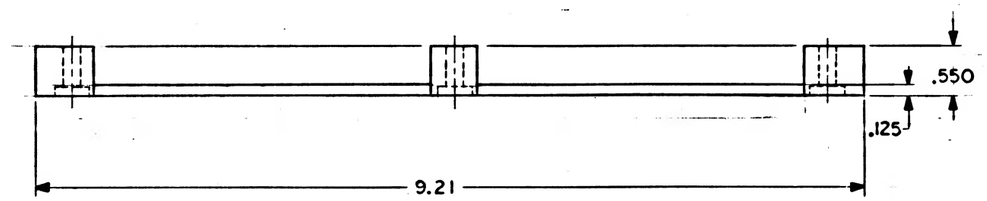
MASTER

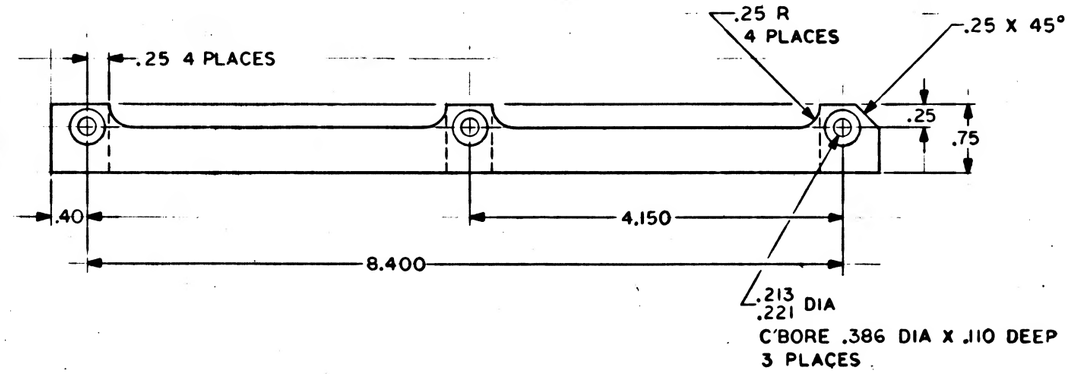
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008164

REVISIONS 05333			
SYM	DESCRIPTION	DATE	APPROVAL





NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .005/.020

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1014606	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX±.005 XXX±.010 ANGLES ± 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN J. Falzone DATE DEC 63
CHECKED
APPROVAL D.J. Grace 12-20-63
APPROVAL D. G. Test
NASA APPROVAL W.J. Ahrens 12-20-63
MIT APPROVAL W. Huffman 12-20-63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CLAMP, CABLE LEFT

CODE IDENT NO.
SIZE C
NASA DRAWING NO. 1008164
SCALE 1/1 WT SHEET 1 OF 1

MASTER

INCHES
0 2
PHOTOGRAPHIC SCALE ONLY

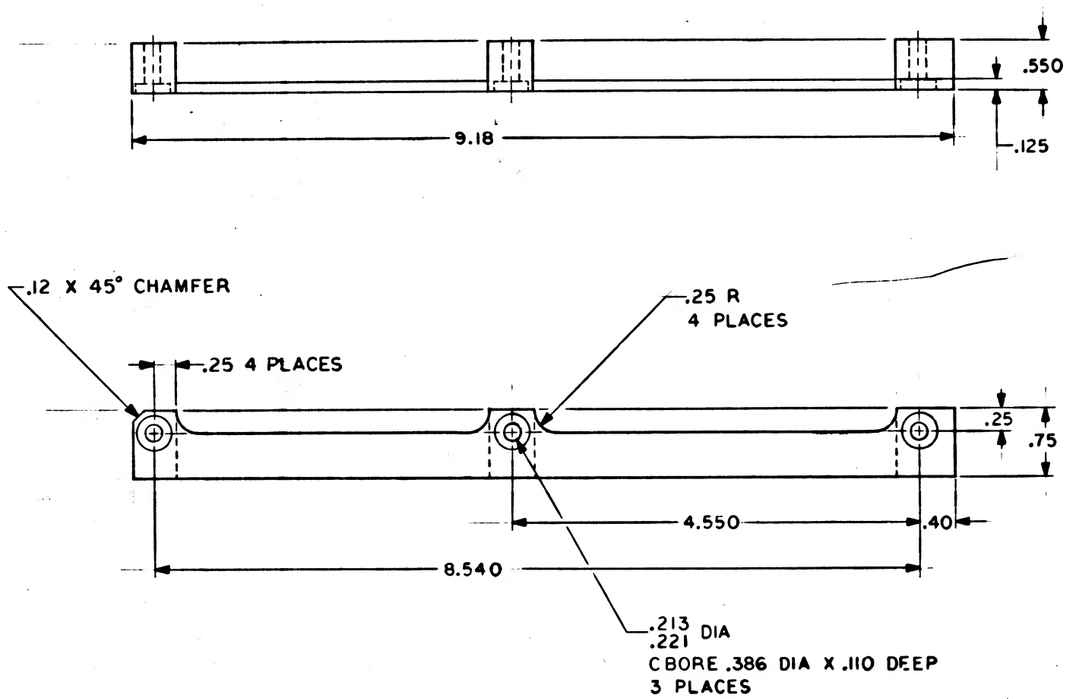
1008164

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1008165

REVISIONS 05333

SYM	DESCRIPTION	DATE	APPROVAL



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: ALUM 6061-T6 PER QQ-A-327
3. FINISH: ANODIZE PER MIL-A-8625, TYPE II, DYED BLACK
4. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .005/.020

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1014606	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX±.005 XXX±.010 ANGLES ± 0°30'
DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

HEAT TREATMENT:

FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN D. DeVeyano DATE 12 DEC 62
CHECKED
APPROVAL J. F. Jones 12-20-63
APPROVAL D. R. Hoag

NASA APPROVAL W. J. Rhine 12-20-63
MIT APPROVAL W. Kaplan 20 Dec 63

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CLAMP, CABLE RIGHT

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	C	1008165

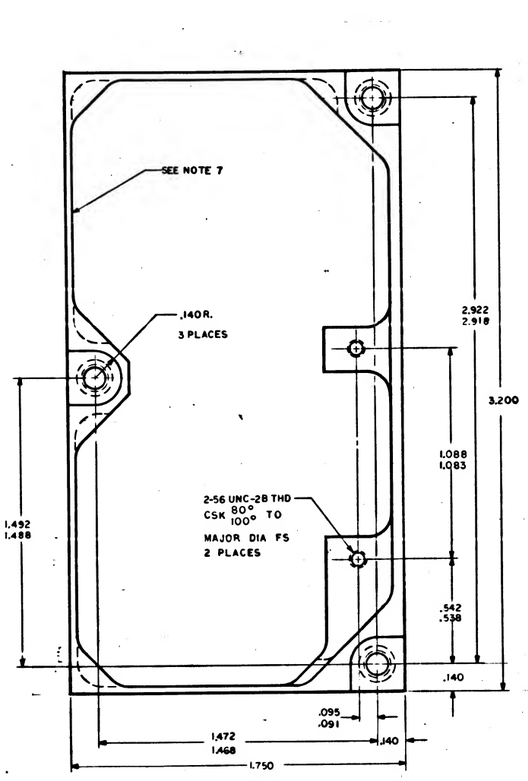
SCALE 1/1 | WT | SHEET 1 OF 1

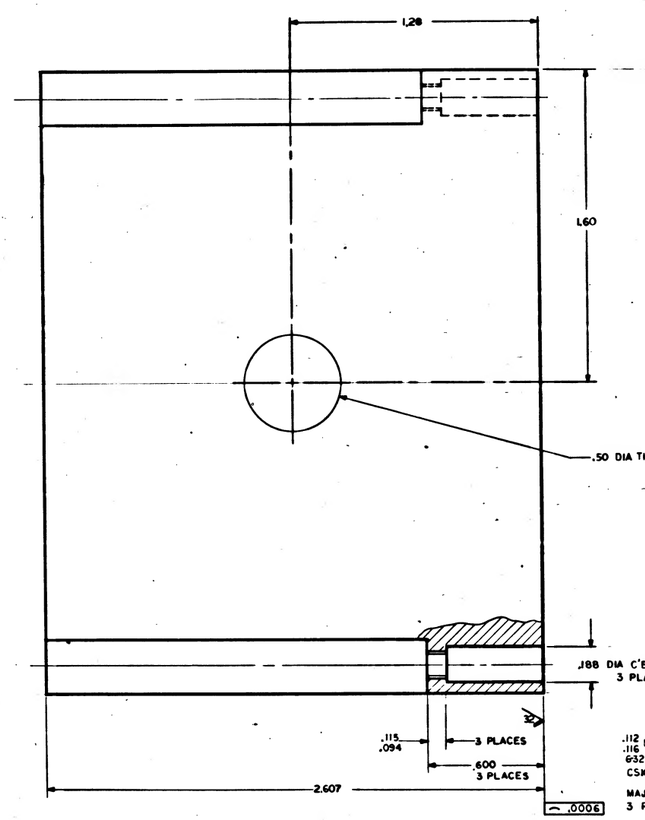
MASTER

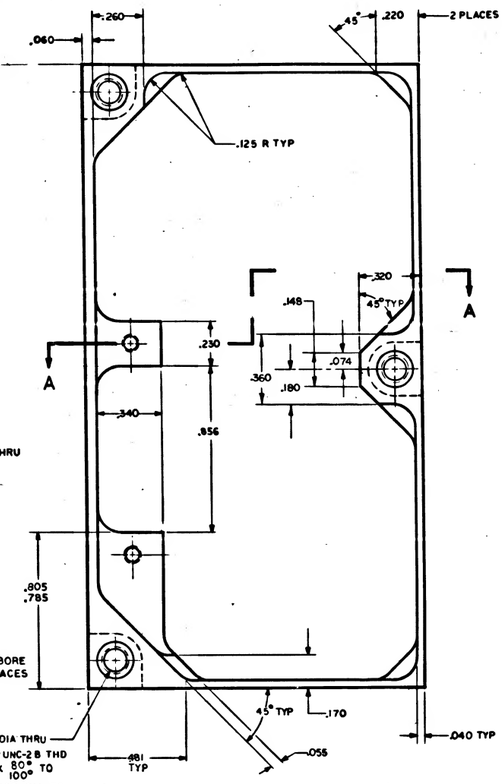
INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

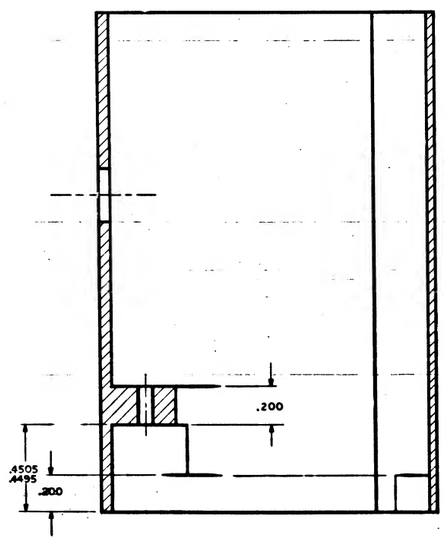
1008165

REVISIONS 11037			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 4961	1/14/69	









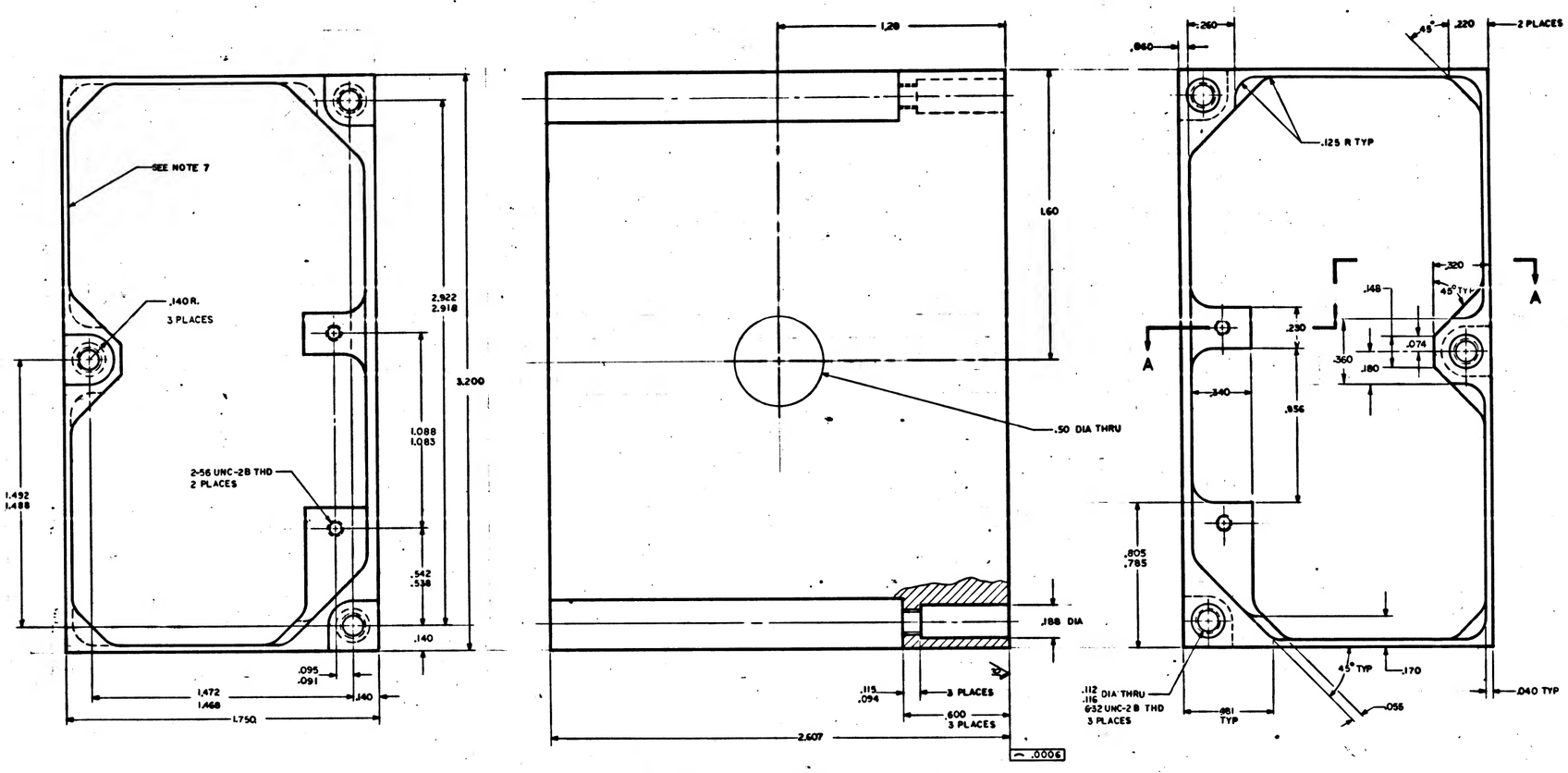
SECTION A-A

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202, TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX
5. UNLESS OTHERWISE SPECIFIED 125/ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN, MARK PER ND 1002019. LOCATE CENTRALLY

MASTER

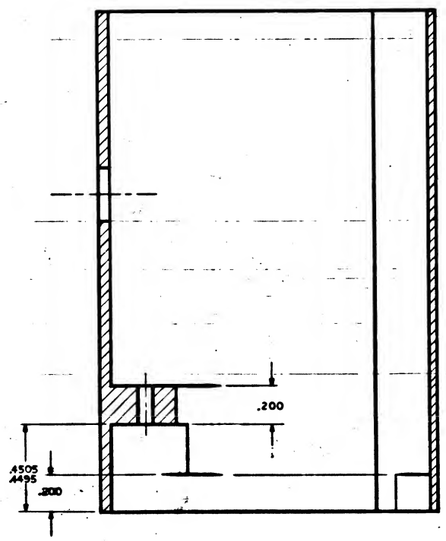
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± — XXX ± .005 ± 1° XX ± .02 DO NOT SCALE THIS DRAWING MATERIAL SEE NOTE 2 HEAT TREATMENT FINAL FINISH SEE NOTE 3	MIT INSTRUMENTATION LAB, Cambridge, Mass. DRAWN [illegible] DATE 12-20-68 CHECKED [illegible] APPROVAL [illegible] APPROVAL [illegible] NASA APPROVAL MIT APPROVAL [illegible]
1007123		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
NEXT ASSY	USED ON	FRAME, SIGNAL CONDITIONER, GIMBAL RESOLVER	
APPLICATION		CODE IDENT NO — SIZE E NASA DRAWING NO 1008166 SCALE 4/1 WT — SHEET 1 OF 1	



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202, TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX
5. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN. MARK PER ND 1002019. LOCATE CENTRALLY



SECTION A-A

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± — XX± .05 XX± .02 ± 1° DO NOT SCALE THIS DRAWING
1007123		MATERIAL SEE NOTE 2
NEXT ASSY	USED ON	HEAT TREATMENT —
APPLICATION		FINAL FINISH SEE NOTE 3

MIT INSTRUMENTATION LAB Cambridge, Mass.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

DRAWN [illegible] DATE 12-20-65

CHECKED [illegible]

APPROVAL [illegible]

APPROVAL [illegible]

NASA APPROVAL [illegible]

MIT APPROVAL [illegible]

FRAME, SIGNAL CONDITIONER, GIMBAL RESOLVER

CODE IDENT NO. — SIZE E NASA DRAWING NO. 1008166

SCALE 4/1 WT — SHEET 1 OF 1

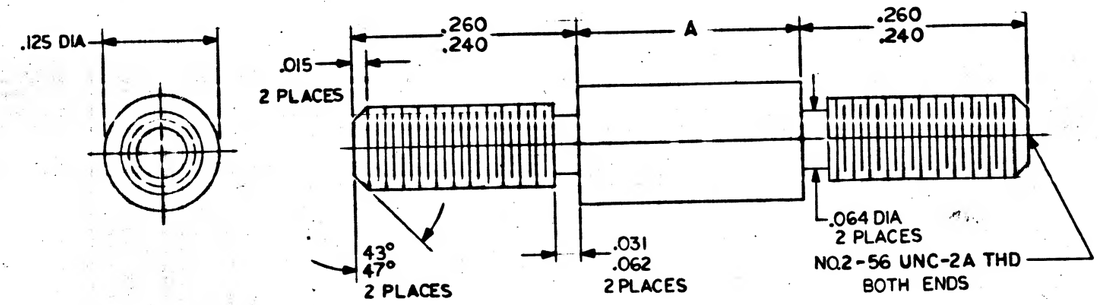
1008166

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

8918001

REVISIONS 11097

SYM	DESCRIPTION	DATE	APPROVAL



PART NUMBER	DIM. A
1008168-1	.250
1008168-2	.300

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: NYLON PER MIL-P-17091, TYPE I
3. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
4. 125 ALL OVER
5. IDENTIFY PER ND1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007123	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —— DECIMALS ±.005 ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
——
FINAL FINISH
——

MIT
INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN DATE 2 Nov 69
CHECKED
APPROVAL 7/29/69
APPROVAL 7/29/69
NASA APPROVAL
MIT APPROVAL

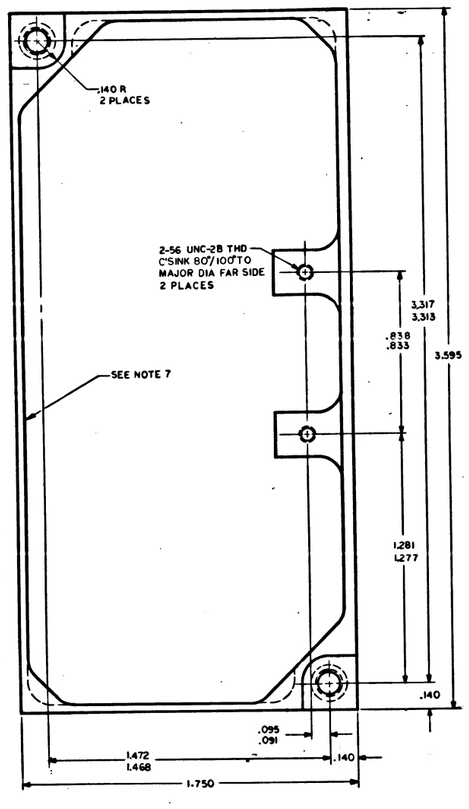
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

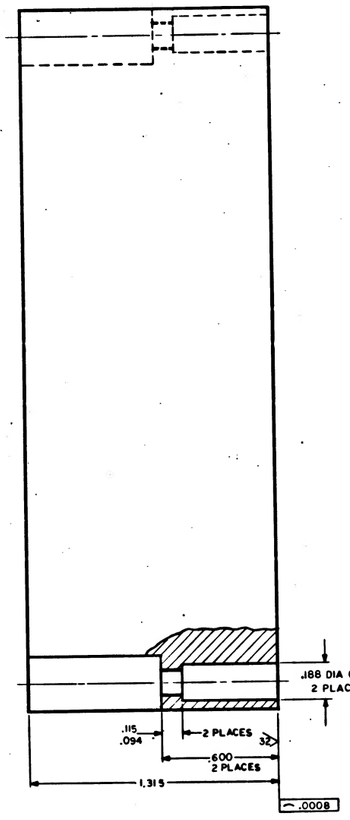
SPACER, STUD

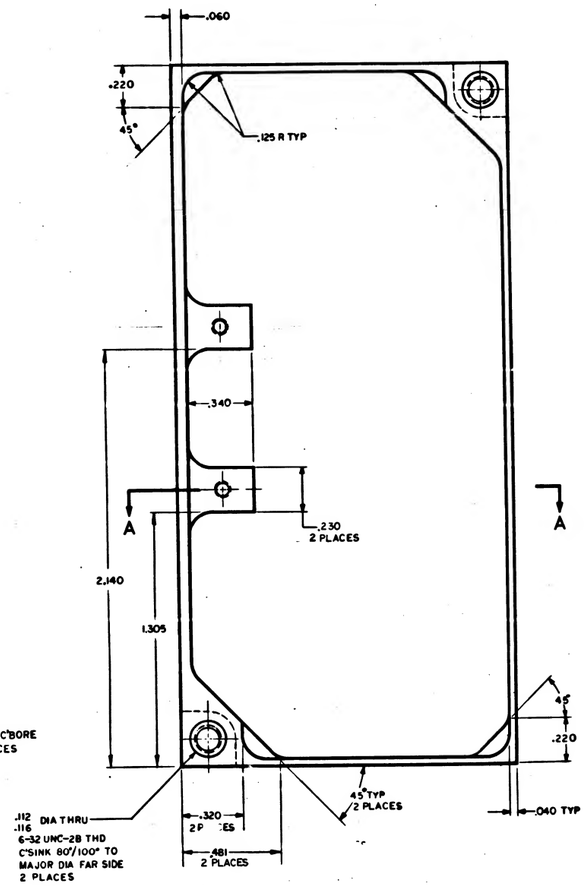
CODE IDENT NO.	SIZE	NASA DRAWING NO.
——	C	1008168
SCALE 10/1	WT ——	SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 1493	11/6/64	WK

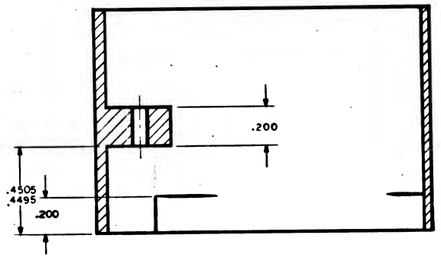






NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX.
5. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN. MARK PER ND 1002019. LOCATE CENTRALLY



SECTION A-A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

MASTER

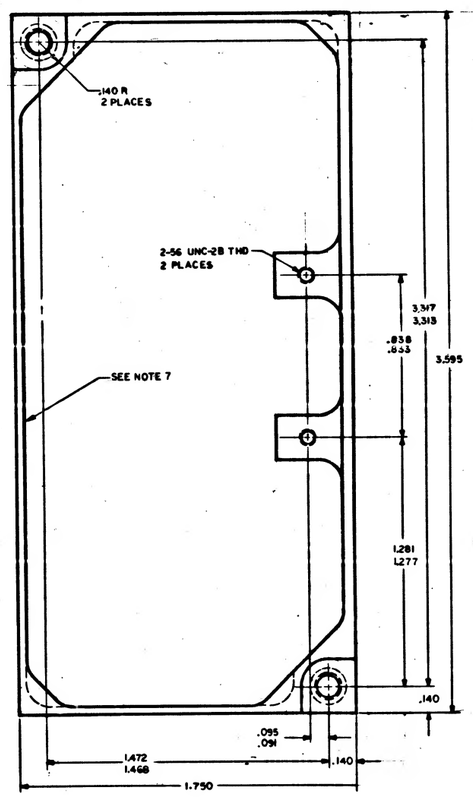
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XXX ±.005 XX ±.02 ANGLES ± 1° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass. — MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		MATERIAL SEE NOTE 2	DRAWN — DATE 12 Jan 65
		HEAT TREATMENT —	CHECKED —
1007124		FINAL FINISH SEE NOTE 3	APPROVAL —
NEXT ASSY	USED ON		NASA APPROVAL —
APPLICATION			MIT APPROVAL —

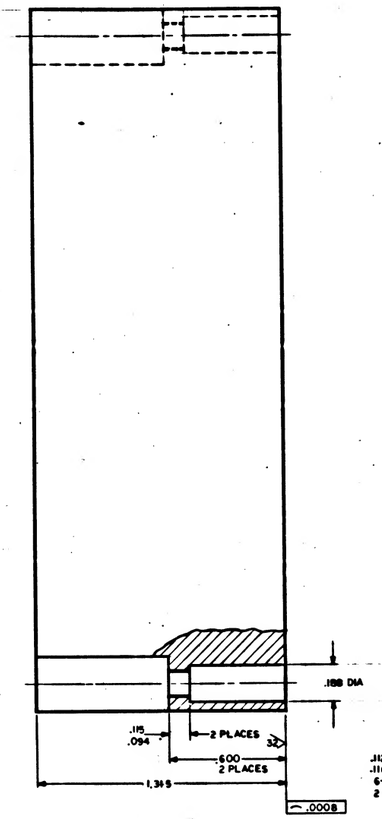
FRAME
SIGNAL CONDITIONER
TORQUE MOTOR

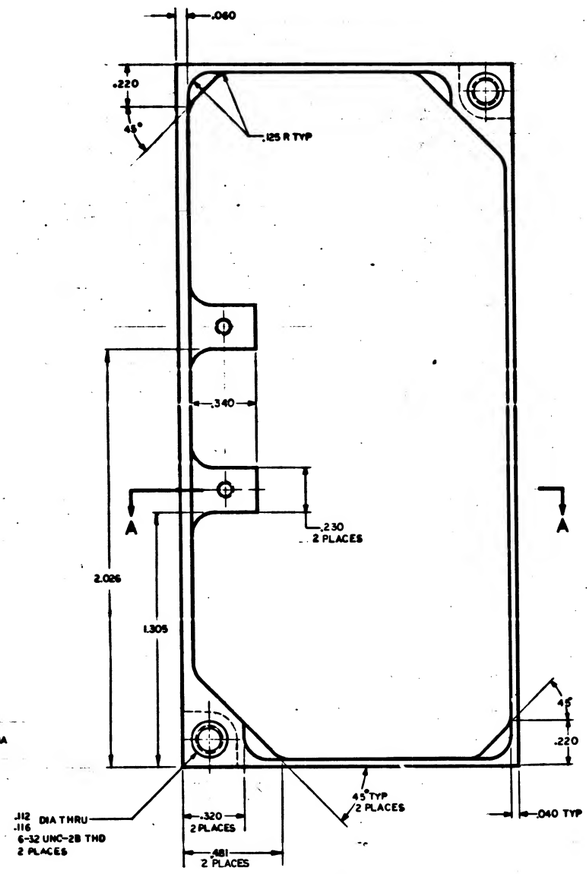
CODE IDENT NO.	SIZE	NASA DRAWING NO.
—	E	1008170

SCALE 4/1 — WT — SHEET 1 OF 1

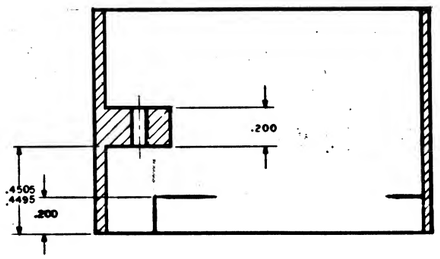
1008170 A







NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX.
5. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005 /.015
7. PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN. MARK PER ND 1002019. LOCATE CENTRALLY



SECTION A-A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± XXX: .005 ± 1° .XX: .02 DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass.
		MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
1007124		HEAT TREATMENT	FRAME SIGNAL CONDITIONER TORQUE MOTOR
NEXT ASSY	USED ON	FINAL FINISH SEE NOTE 3	CODE IDENT NO. SIZE E NASA DRAWING NO. 1008170
APPLICATION			SCALE 4/1 WT SHEET 1 OF 1

DRAWN [signature] DATE 12 Jan 67
CHECKED [signature]
APPROVAL [signature]
APPROVAL [signature]
NASA APPROVAL [signature]
MIT APPROVAL [signature]

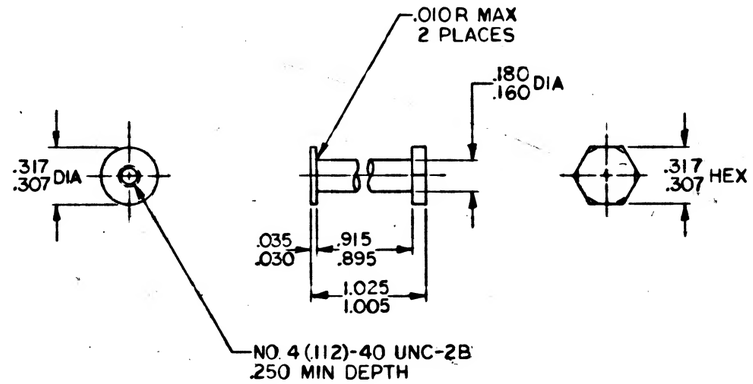
MASTER

1008170

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTIONS THAT MAY IN ANY WAY BE RELATED THERETO.

1218001

REVISIONS 11097			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. REMOVE ALL BURRS AND BREAK SHARP EDGE .005/.015
3. MATERIAL: CRES QQ-S-763 CLASS 303 COND A
4. FINISH: PASSIVATE PER MIL-F-14072 (SIG C) FINISH E 300
5. 63√ ALL OVER
6. IDENTIFY PER ND 1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007130	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 3
HEAT TREATMENT: —
FINAL FINISH: SEE NOTE 4

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN L Krahn DATE 25 FEB 64
CHECKED
APPROVAL 7/20/64
APPROVAL 7/20/64
NASA APPROVAL
MIT APPROVAL 7/21/64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

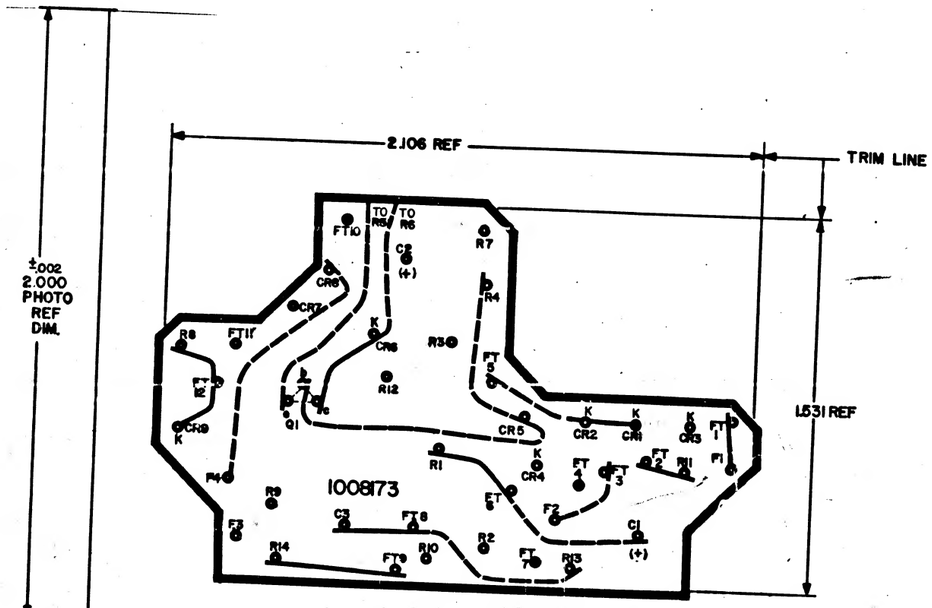
BUSHING, CONNECTOR

CODE IDENT NO. —
SIZE C
NASA DRAWING NO. 1008171
SCALE 2/1
WT —
SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — UNLESS GOVERNMENT DESIGNATED SPECIFICATIONS, OR OTHER DATA ARE USED FOR ART THEREON OTHER THAN AS SHOWN, THIS DRAWING IS DEFINITELY NOT THE GOVERNMENT PROCUREMENT SPECIFICATION. THE UNITED STATES GOVERNMENT ASSUMES NO RESPONSIBILITY WHATSOEVER FOR ANY USE, SETTING FORTH OR IMPLIED, MADE OF THIS DRAWING OR THE INFORMATION OR DATA CONTAINED THEREON, IF THE SAME MAY BE USED IN ANY MANNER, WHETHER OR NOT SUCH USE IS INVENTIVE, OR IN VIOLATION OF THE RIGHTS OF THE GOVERNMENT OR ANY PATENT OWNER, NOR DOES THE DISCLOSURE OF SUCH DATA OR DRAWING CONVEY ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY BE AT ANY WAY BE RELATED THERETO.

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
	10159		



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
5. MATERIAL: FILM .005/.008 THICK PER L-F-340 TYPE IB, CLASS 2, STYLE IA
6. ● .046/.056 DIA PUNCH

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007125	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 5
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN Louis Lange DATE 4-8-64
CHECKED [signature] DATE 4-8-64
APPROVAL [signature] DATE 15 APR 64
APPROVAL [signature] DATE 15 APR 64
NASA APPROVAL [signature] DATE 4/16/64
MIT APPROVAL [signature] DATE 4/16/64

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

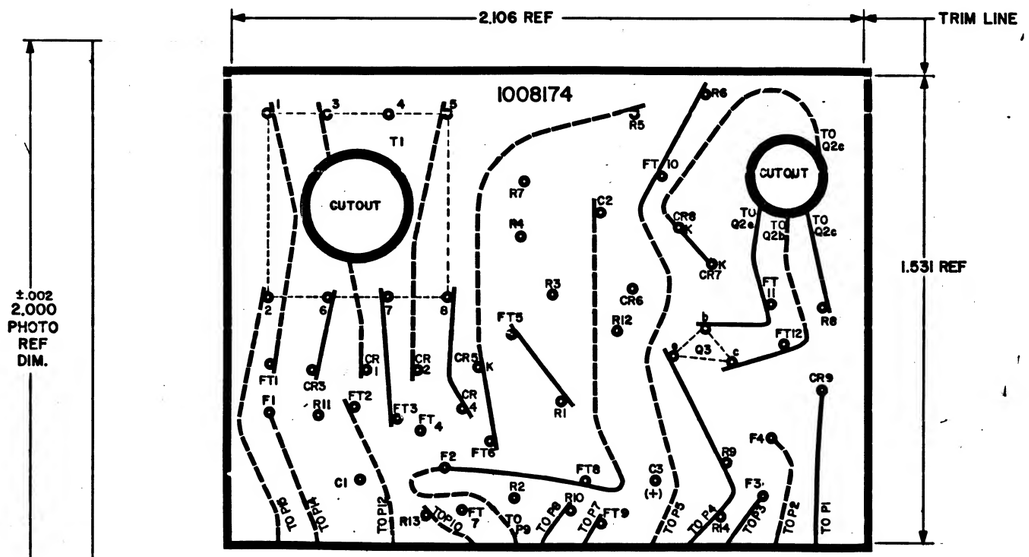
INSULATOR TOP PHOTOGRAPHIC MASTER
POWER SUPPLIES
SIGNAL CONDITIONER

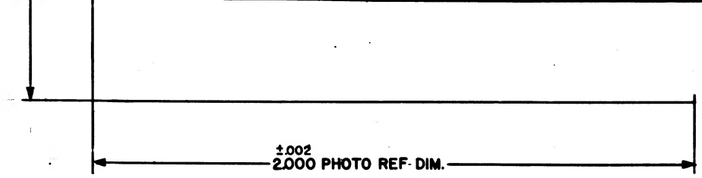
CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008173
SCALE 5/1 | WT | SHEET 1 OF 1

INCHES 0 1 2

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 10159			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 14546	1/16/69	





NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
5. MATERIAL: FILM .006 /.008 THICK PER L-F-340 TYPE IB, CLASS 2, STYLE IA
6. ⊙.045 /.055 DIA PUNCH

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007125	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN Louis DeLuca DATE 2/16/68
CHECKED Christopher Kraft
APPROVAL W. M. Copps 13 JAN 69
APPROVAL W. R. Woodward

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INSULATOR BOTTOM PHOTOGRAPHIC MASTER
POWER SUPPLIES SIGNAL CONDITIONER

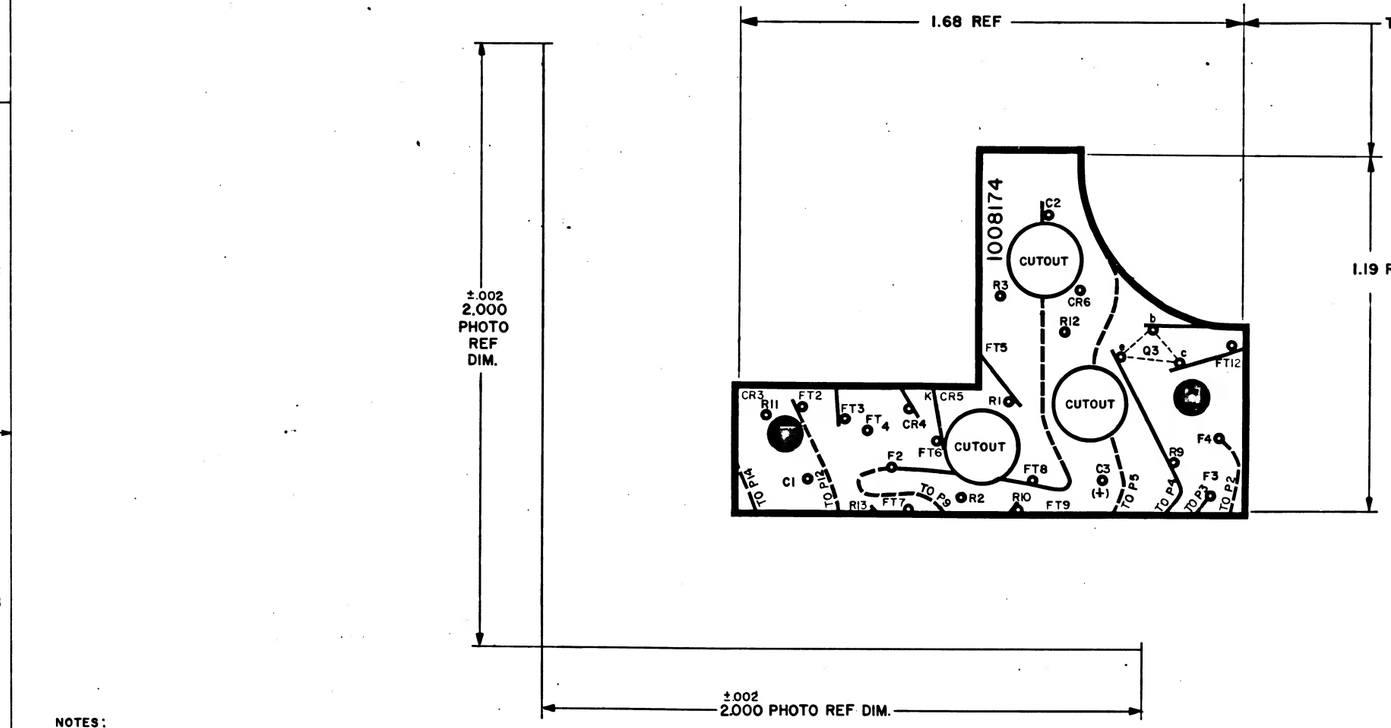
NASA APPROVAL W J Peters 12-1-69
MIT APPROVAL W. R. Woodward 6/4/68

CODE IDENT NO. | SIZE D | NASA DRAWING NO. 1008174
SCALE 5/1 | WT | SHEET 1 OF 1

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 14546	3/16/65	[illegible]
B	REVISED PER TDRR 19304	6/21/65	[illegible]

3-22-65



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
5. MATERIAL: FILM .006 /.008 THICK PER L-F-340 TYPE 1B, CLASS 2, STYLE 1A
6. ⊙ .045 /.055 DIA PUNCH
7. ⊙ 12/.13 DIA PUNCH ALL HOLES

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

1007125
NEXT ASSY | USED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGL
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T
INSTRUMENTATION LAB
Cambridge Mass

DR: Louis Pilone DATE 2/26/64
CHECKED
APPROVAL
APPROVAL

NASA APPROVAL
M.I.T. APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

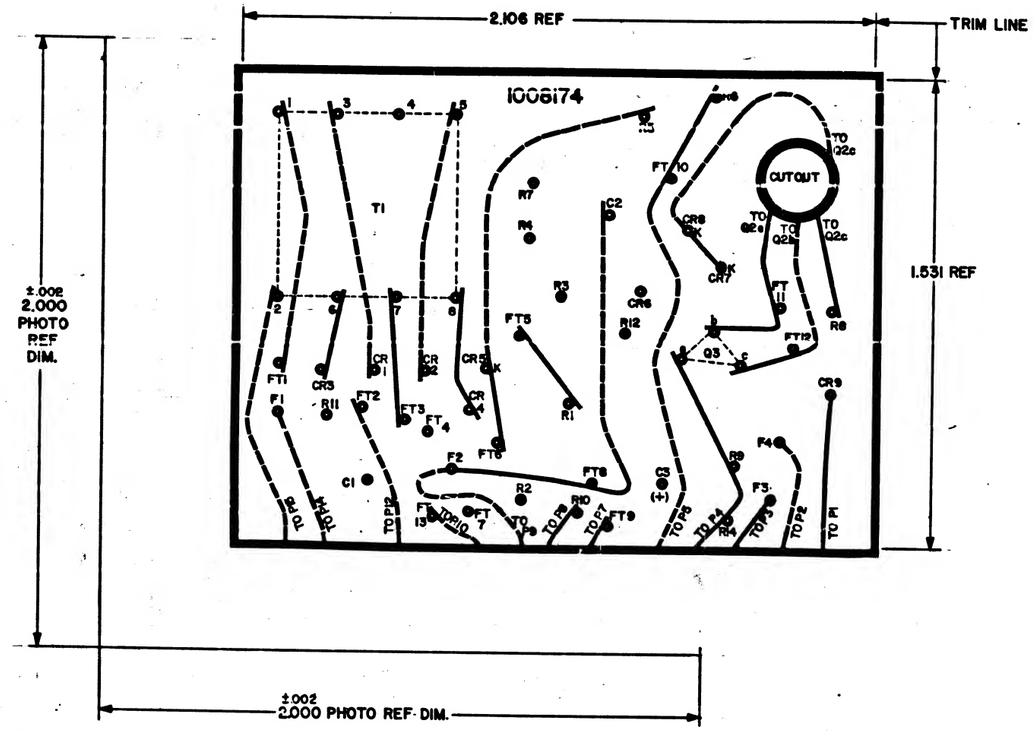
INSULATOR BOTTOM PHOTOGRAPHIC MASTER POWER SUPPLIES SIGNAL CONDITIONER

CODE IDENT NO 80230 | SIZE D | DWG NO 1008174 | REV B
SCALE 5/1 | SHEET 1 OF 1

1008174 B

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
5. MATERIAL: FILM .006 /.008 THICK PER L-F-340 TYPE IB, CLASS 2, STYLE IA
6. ⊕.045 /.055 DIA PUNCH

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± — DECIMALS ± — ANGLES ± — DO NOT SCALE THIS DRAWING
		MATERIAL —
1007125		HEAT TREATMENT —
NEXT ASSY	USED ON	FINAL FINISH —
APPLICATION		

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS. — DSR NO. — CONTRACT

DRAWN Lorraine Mac DATE 14 JAN 69
CHECKED [illegible] DATE 14 JAN 69
APPROVAL [illegible] DATE 15 JAN 69
APPROVAL [illegible] DATE 15 JAN 69

NASA APPROVAL _____
MIT APPROVAL [illegible] 6/14/69

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INSULATOR BOTTOM PHOTOGRAPHIC MASTER POWER SUPPLIES SIGNAL CONDITIONER

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008174
SCALE 5/1	WT	SHEET 1 OF 1

INCHES 0 1 2

REVISIONS				
ZONE	DESCRIPTION	DATE	APPROVAL	
A	REVISED PER TDRR 36890	9/21/67	[illegible]	

SECTION D-D

.005 MAX. ALLOWABLE STEP ABOVE SURFACE
STEP BELOW SURFACE NOT PERMITTED -D-

.12 R

.12 2 PLACES

.12 R

.100

.697 / .696

2.150 / 2.130

.748 / .746

30° TYP

.135 / .115 TYP

.270 / .260

B

D

D

B

.385 / .365

.110 / .090

.000 / .015 R

L570

32

.0005 IN/IN -D-

.160

3.450

.710 / .690

.570

.100

.285

CUTOUT THRU

.06 R TYP 4 PLACES

1.070 REF

.812

.610

1.625

1.237

.100 TYP

.140 DIA
.260 DIA SPOTFACE
.248
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

5°0'±0°15'

30°

.040 / .060 TYP

30°

.477

30°

.040 / .060 BLEND WITH .12 R

VIEW A
SCALE 2/1

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.761

.125

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.125 MAX

-F-

-B-
±C.004

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 / .690

.078 / .073 DIA 45 HOLES

F

.094R

F

.186 / .148

9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE

2.492 / 2.448

1.912

1.00

.314 / .310

.040 / .060 x 45°±5°
2 PLACES
BLEND WITH .12 R

#4-40 UNC-3B
SEE NOTE 6

.478 / .372

.137 / .136 DIA 60 HOLES

5 EQUAL SPACES AT .200±.002 PITCH
TOTAL 1.000±.002
TOLERANCE NON-CUMULATIVE

.430 / .400

SECTION F-F

.447 / .427

.210

.080

.12 TYP

.005 R MAX PERMISSIBLE

.125 TYP

3.187

3.010 / 2.990

2.227

.000 / .030 R

32

-C-

.005

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.16R 2 PLACES

.062

.125

.094 CUTOUT THRU

.12 3 PLACES

.330 / .310

BREAK EDGE THIS SIDE .08

12.970

CUTOUT THRU

.520 / .500

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

G

.050

.094

G

.188

.570 / .550

.595 DIM .575 FOR STEP ONLY

.610 / .596

.062 x 45° TYP

.030 R

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

.005 MAX ALLOWABLE STEP ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED -E-

BREAK 2 EDGES THIS SIDE .08

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C
B
A
E
E
A
B
C

.406

.812

.562

L135
1.125

.813
.811

L625
L623

1.070

2.150
2.130 REF

-D- -E-

SECTION G-G
SCALE 2/1

.729 REF

16.7129
16.7165 (FROM GAGE POINT)

17.488
17.462

.015 R MAX PERMISSIBLE

SECTION E-E

.186 / .150 DIA
CSK 100° x .230 / .210

.228
.226

5°0'±0°15'

SECTION A-A
2 PLACES

.250
.246

2

.165 / .155 DIA Th
10-32UNF-2B THRU
82° ±1° CSK, .199 / .199 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.250
.246

.281

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198
   DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.18 FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHRACTERS BLACK PER ND 1002018 EXCEPT SURFACE D. AFTER PLATING ELECTRO CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND [illegible] USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND [illegible] USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008175 -1	FRAME, TRAY	1

LIST OF MATERIALS

MIT INSTRUMENTATION LAB Cambridge, Mass.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

DRAWN J.C. Hunter DATE 4/4/67
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 7/27/67
MIT APPROVAL

FRAME, TRAY 5

CODE IDENT NO
SIZE E
NASA DRAWING NO. 1008175
SCALE 1/1 WT
SHEET 1 OF 3

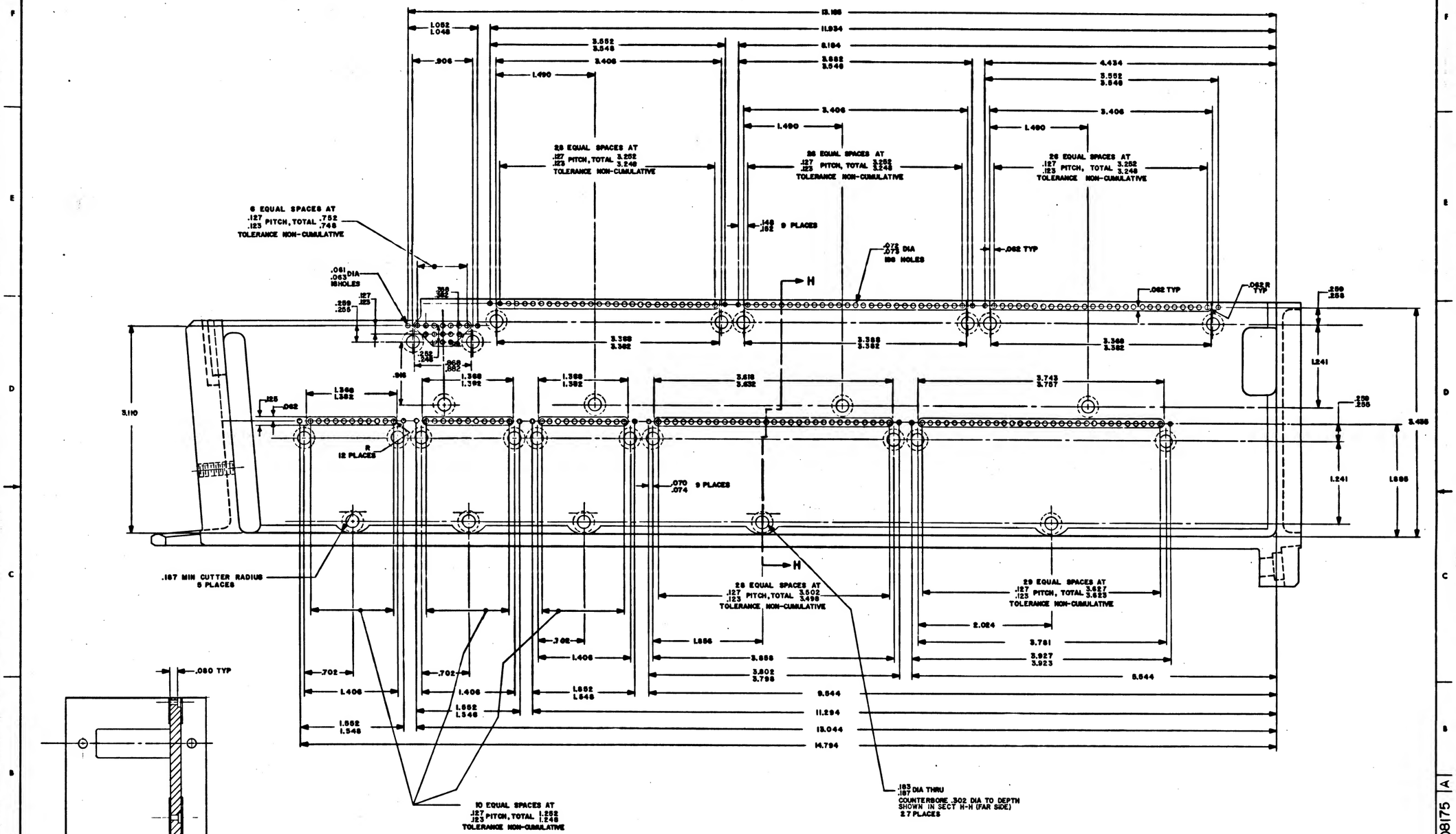
1007168 NEXT ASSY USED ON APPLICATION

HOISTER

INCHES
PHOTOGRAPHIC SCALE ONLY

1008175 A

REVISIONS TDRR 06490			
ZONE	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06490	3-4-70	[illegible]



VIEW B-B
SCALE: 2:1

SECTION H-H

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ±.02 .XXX ±.005 ANGLES ± 30' DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINISH	MIT INSTRUMENTATION LAB MANNED SPACECRAFT CENTER HOUSTON, TEXAS
			DRAWN J.J. Martin DATE 9/4/68
			CHECKED
			APPROVAL
			APPROVAL D.A. Hoag 9/4/68
1007165			NASA APPROVAL [illegible] 12/29/68
NEXT ASSY	USED ON	APPLICATION	MIT APPROVAL [illegible]

FRAME, TRAY 5

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008175

SCALE 2:1 WT SHEET 2 OF 3

1008175 A

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	THIS SHEET ADDED PER TDRR 06890	9/15/67	

.12 HIGH REF

45A5J1

PARTIAL SECTION K-K

K

K

1007054 1007054 1007054 1007054

1007064 1007057 1007058 1007055 1007055 1007055

SURFACE-D-REF

.08 HIGH REF

.12 HIGH REF

VIEW ROTATED 180°

SEE NOTE 9

.12 HIGH REF

.12 HIGH SEE NOTE 8

45A5P1

FRAME ASSEMBLY TRAY 5 1007145 REV SER NO.

DO NOT PAINT THIS SURFACE

1.70 .75

DO NOT PAINT EDGES OF OPENING

SEE NOTE 10

SEE NOTE 9

J

J

45A5J5 45A5J4 45A5J3 45A5J2

.50

45A5J11 45A5J10 45A5J9 45A5J8 45A5J7 45A5J6

DO NOT PAINT THIS SURFACE

.08 HIGH TYP SEE NOTE 8

.12 HIGH TYP SEE NOTE 8

.08 HIGH REF

MARKING VIEWS

.08 HIGH REF

SECTION J-J

REV J THIS SHEET ADDED

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINAL FINISH	NEXT ASSY / USED ON / APPLICATION

MIT INSTRUMENTATION LAB Cambridge Mass.

DRAWN [illegible] DATE 10 FEB 66

CHECKED [illegible]

APPROVAL [illegible]

APPROVAL

NASA APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 5

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008175

SCALE 1/1 | WT | SHEET 3 OF 3

1008175 A

INCHES PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06690	7/11/66	
B	REVISED PER TDRR 11322	10 AUG 67	

SECTION D-D

.005 MAX. ALLOWABLE STEP ABOVE SURFACE [-D-]
STEP BELOW SURFACE NOT PERMITTED

.12 R

.12 2 PLACES

.12 R

.100

.697 / .696

30° TYP

2.150 / 2.130

.748 / .746

.135 / .115 TYP

.270 / .260

.385 / .365

.110 / .090

.000 R / .015

1.570

.32

[-D-] .0005 IN/IN

.160

3.450

.710 / .690

.570

.285

.100

1.070 REF

.812

.648

1.625

1.237

CUTOUT THRU

.06 R TYP 4 PLACES

.100 TYP

.140 DIA
.260 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5°0'±0°15'

.040 / .060 TYP

30°

.477

30°

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.761

.125

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE [-F-]

.125 MAX

[-F-]

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

[-B-] ⊥ .004

BREAK EDGE THIS SIDE .03

12.970

.447 / .427

.210

.080

.12 TYP

.005 R MAX PERMISSIBLE

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 / .690

.072 / .073 DIA 45 HOLES

45° TYP

3.187

3.010 / 2.990

2.227

.125

.094R

.55 / .45

9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE

1.912

2.462 / 2.448

.100

.314 / .310

.040 / .060 x 45°±5° 2 PLACES BLEND WITH .12 R

.576 / .572

4-40 UNC-3B SEE NOTE 6

.137 / .139 DIA 60 HOLES

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000±.002 TOLERANCE NON-CUMULATIVE

.430 / .400

SECTION F-F

.000 / .030 R

[-C-]

.005

32

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.16R 2 PLACES

.094 CUTOUT THRU

.062

.125

.12 3 PLACES

.330 / .310

.005 MAX ALLOWABLE STEP [-E-] ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED

.030 R MAX PERMISSIBLE ONE PLACE ONLY

CUTOUT THRU

.520 / .500

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

.050

.094

.188

.570 / .550

.595 DIM .575 FOR STEP ONLY

.062 x 45° TYP

.610 / .596

.030 R

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

BREAK 2 EDGES THIS SIDE .03

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C B A E A B C

.404

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

[-D-] [-E-]

SECTION G-G
SCALE 2/1

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198
   DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.1 & FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHRACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN.

.186 / .190 DIA CSK 100° X .230 / .210

.228 / .226

5°0'±0°15'

SECTION A-A
2 PLACES

.250 / .246

(2) .165 / .169 DIA THRU 10-32UNF-2B THRU

82° ±1° CSK, .189 / .199 DIA

.005 DIA SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA X .142 DEEP

.281

.250 / .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008175 -1	FRAME, TRAY	1

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	
		MATERIAL SEE NOTE 2	
1007165		HEAT TREATMENT —	
HEAT ASSY	USED ON	FINAL FINISH SEE NOTE 6	
APPLICATION			

MIT INSTRUMENTATION LAB Cambridge 39 Mass.

DRAWN J.O. Martin DATE 9/26/63

CHECKED

APPROVAL

APPROVAL D.R. Trask 9/26/63

NASA APPROVAL 1/27/69

MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 5

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175

SCALE 1/1 | WT | SHEET 1 OF 3

1008175 B

REVISIONS TDRR 08505			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 01490	4/14/69	
B	REVISED PER TDRR 11322	10/9/69	

13.185
11.934
8.184
4.434
1.052 / 1.048
3.552 / 3.548
3.406
1.490
.906
26 EQUAL SPACES AT .127 / .123 PITCH, TOTAL 3.252 / 3.248 TOLERANCE NON-CUMULATIVE
6 EQUAL SPACES AT .127 / .123 PITCH, TOTAL .752 / .748 TOLERANCE NON-CUMULATIVE
.148 / .152 8 PLACES
.072 / .073 DIA 158 HOLES
.062 TYP
.062 R TYP
.061 / .063 DIA 16 HOLES
.259 / .255
.127 / .123
.358 / .362
3.368 / 3.382
.252 / .248
.868 / .862
.916
1.368 / 1.382
3.618 / 3.632
.125
.062
3.110
R 12 PLACES
.070 / .074 9 PLACES
1.241
3.435
1.885
H
.187 MIN CUTTER RADIUS 4 PLACES
28 EQUAL SPACES AT .127 / .123 PITCH, TOTAL 3.502 / 3.498 TOLERANCE NON-CUMULATIVE
.702
1.406
1.552 / 1.548
1.856
3.656
3.802 / 3.798
9.544
11.294
13.044
14.794
.183 / .187 DIA THRU COUNTERBORE .302 DIA TO DEPTH SHOWN IN SECT H-H (FAR SIDE) 24 PLACES
10 EQUAL SPACES AT .127 / .123 PITCH, TOTAL 1.252 / 1.248 TOLERANCE NON-CUMULATIVE

VIEW B-B
SCALE: 2:1

.080 TYP
.074 / .066

SECTION H-H

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

1007165	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ±.02 .XXX ±.005 ANGLES ± 30'
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

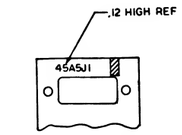
M I T INSTRUMENTATION LAB Cambridge Mass.
MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN J. D. Martin DATE 9/27/68
CHECKED
APPROVAL
APPROVAL D. W. Hurt 9/27/68
NASA APPROVAL 1/27/70
M/T APPROVAL

FRAME, TRAY 5

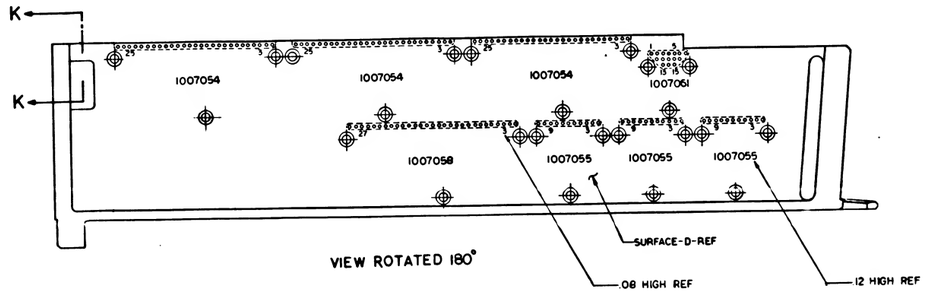
CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175
SCALE 2:1 | WT | SHEET 2 OF 3

1008175

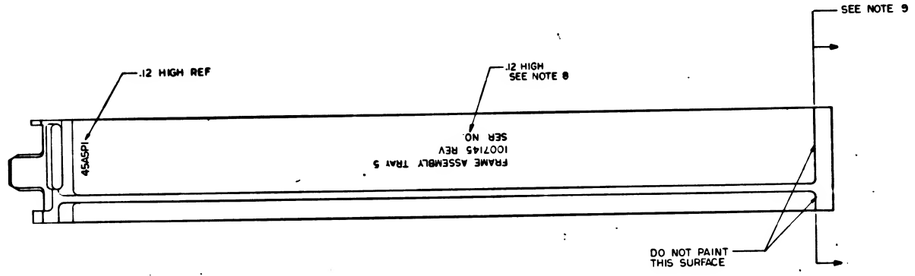
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 06490	9/65	[illegible]
B	REVISED PER TDRR 11322	24 AUG 65	JWP DAS

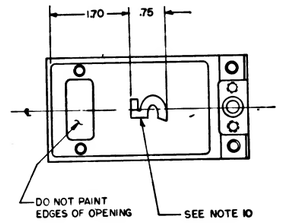


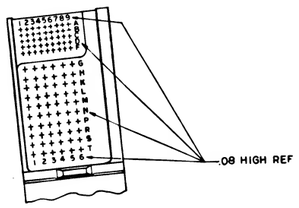
PARTIAL SECTION K-K

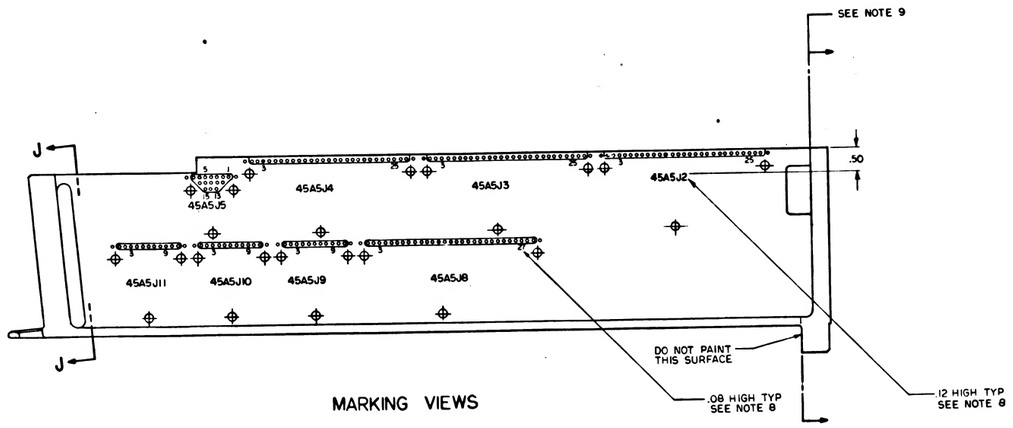


VIEW ROTATED 180°

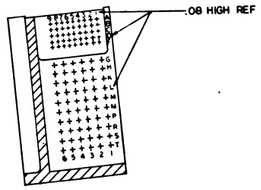








MARKING VIEWS



SECTION J-J

REV J THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB CAMBRIDGE MASS
CONTRACT
DRAWN [illegible] DATE 18 DEC 64
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL —
NASA APPROVAL [illegible]
MIT APPROVAL [illegible] 18 FEB 65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 5

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175
SCALE 1/1 | WT | SHEET 3 OF 3

1008175 B

SYM	REVISIONS (TDRR 03555) DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06490	11/66	WH
B	REVISED PER TDRR 11322	6/9/67	JWH DAS
C	REVISED PER TDRR 11320	6/9/67	JWH DAS

SECTION D-D

.005 MAX. ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.12 2 PLACES

.12 R

.12 R

.385 .365

.000 .015 R

.110 .090

.570

32 .0005 IN/IN -D-

.160

3.450

.710 .690

.570

.100

.285

CUTOUT THRU

.06 R TYP 4 PLACES

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA
.260 DIA SPOTFACE
2 HOLES

2.150 2.130

.697 .696

.748 .746

30° TYP

.135 .115 TYP

.270 .260

.100

D

D

B

B

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

5°0'±0°15'

.040 .000 TYP

30°

30°

.477

.040 .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.761

.125

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

-B-
⊥ C .004

BREAK EDGE THIS SIDE .03

12.970

.447 .427

.210

.080

.12 TYP

.005 R MAX PERMISSIBLE

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 .690

.072 .073 DIA 45 HOLES

.094 R

F

.155 .145

F

9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE

1.912

.100

.314 .310

2.452 2.448

.040 .060 x 45°±5° 2 PLACES BLEND WITH .12 R

.476 .472

#4-40 UNC-3B SEE NOTE 6

.137 .139 DIA 60 HOLES

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000±.002 TOLERANCE NON-CUMULATIVE

.430 .400

SECTION F-F

.125

45° TYP

3.187

3.010 2.990

2.227

.000 .030 R

32

-C-

.005

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.16 R 2 PLACES

.062

.094 CUTOUT THRU

.12 3 PLACES

.125

.330 .310

.005 MAX ALLOWABLE STEP ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED -E-

CUTOUT THRU

.520 .500

.385 .365

.030 R MAX PERMISSIBLE ONE PLACE ONLY

1.000 1.020

.000 .015 R

4.260 REF

3.700

.050

G

G

.094

.610 .596

.062 x 45° TYP

.595 DIM .575 FOR STEP ONLY

.188

.570 .550

.030 R

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

BREAK 2 EDGES THIS SIDE .03

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

-D- -E-

SECTION G-G
SCALE 2/1

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

.188 DIA .190
CSK 100° x .230 .210

.228 .226

5°0'±0°15'

SECTION A-A
2 PLACES

.250 .246

2

.165 .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 .193 DIA

.005 DIA

SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP

.281

.250 .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

C B A E E A B C

.406

.812

.562

1.135 1.125

.813 .811

1.625 1.623

1.070

2.150 2.130 REF

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198
   DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.1 & FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHRACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008175 -1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	INSTRUMENTATION LAB MANNED SPACECRAFT CENTER HOUSTON TEXAS
MATERIAL SEE NOTE 2	DRAWN J.J. Dalton DATE 6/9/67
HEAT TREATMENT —	CHECKED
FINAL FINISH SEE NOTE 6	APPROVAL
1007165 NEXT ASSY USED ON APPLICATION	APPROVAL D.A. Stark 6/9/67
	NASA APPROVAL 1/4 6/7/67
	MIT APPROVAL

FRAME, TRAY 5

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175

SCALE 1/1 | WT | SHEET 1 OF 3

1008175 C

A

REVISIONS TDRR 06546			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06490	1/14/64	MK
B	REVISED PER TDRR 11322	4/15/64	JWP
C	REVISED PER TDRR 11320	8/20/64	JWP

13.186
11.934
8.184
4.434
1.052
1.048
3.552
3.548
.906
3.406
1.490
26 EQUAL SPACES AT
.127 PITCH, TOTAL 3.252
.123 3.248
TOLERANCE NON-CUMULATIVE
6 EQUAL SPACES AT
.127 PITCH, TOTAL .752
.123 .748
TOLERANCE NON-CUMULATIVE
.148
.152 6 PLACES
.072
.073 DIA
158 HOLES
.062 TYP
.062 R TYP
.061 DIA
.063
16 HOLES
.127
.123
.259
.255
.368
.382
.252
.248
.868
.882
3.368
3.382
.916
1.368
1.382
3.618
3.632
.259
.258
1.241
.238
.236
3.436
1.665
.125
.062
1.366
1.382
3.110.
R
12 PLACES
.070
.074 9 PLACES
H
.187 MIN CUTTER RADIUS
4 PLACES
26 EQUAL SPACES AT
.127 PITCH, TOTAL 3.302
.123 3.298
TOLERANCE NON-CUMULATIVE
.702
1.408
1.858
3.656
3.802
3.798
9.544
11.294
13.044
14.794
1.552
1.548
10 EQUAL SPACES AT
.127 PITCH, TOTAL 1.252
.123 1.248
TOLERANCE NON-CUMULATIVE
.183
.187 DIA THRU
COUNTERBORE .302 DIA TO DEPTH
SHOWN IN SECT H-H (FAR SIDE)
24 PLACES

VIEW B-B
SCALE: 2:1

.080 TYP
.074
.066

SECTION H-H

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

1007165			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± 1/64 .XX ± .02 ± 30'
.XXX ± .005
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

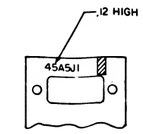
M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS
DRAWN J.J. Masters DATE 6/25/64
CHECKED
APPROVAL
APPROVAL Robert Trout 6/25/64
NASA APPROVAL 1/27/65
MIT APPROVAL 2/26/65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

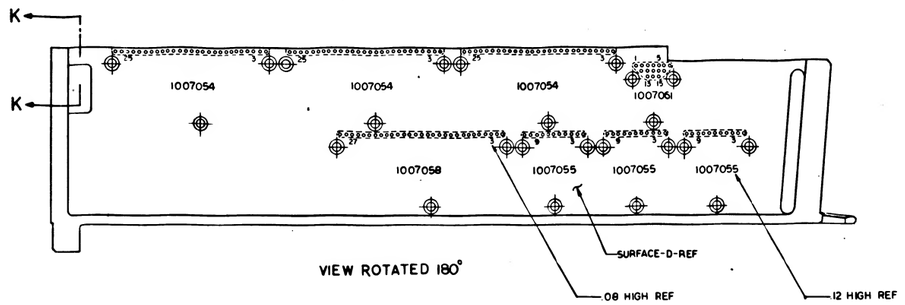
FRAME,
TRAY 5

CODE IDENT NO.	SIZE	DWG DRAWING NO.
	E	1008175
SCALE 2:1	WT	SHEET 2 OF 3

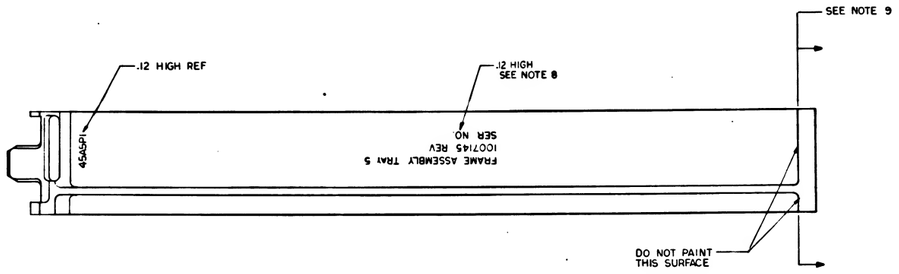
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 24490	4/66	
B	REVISED PER TDRR 11322	6-3	
C	REVISED PER TDRR 11320	6-3	

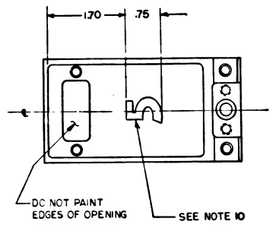


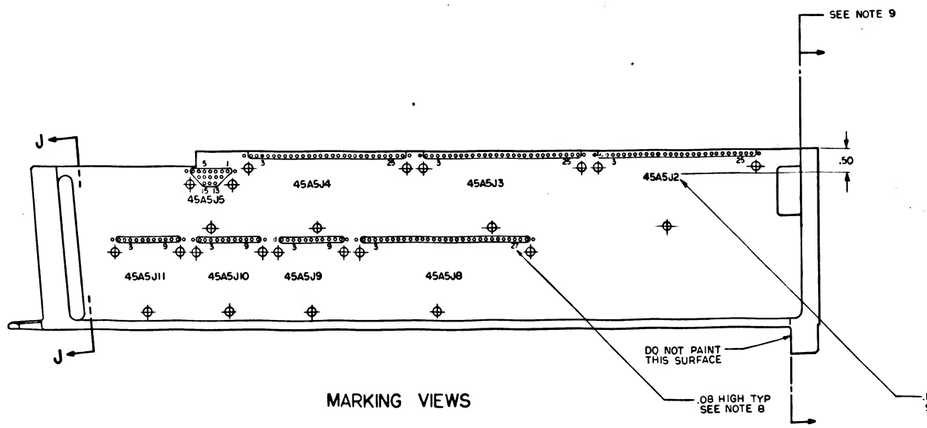
PARTIAL SECTION K-K

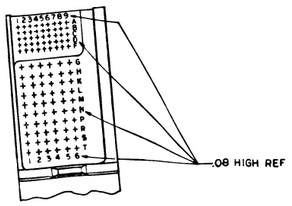


VIEW ROTATED 180°

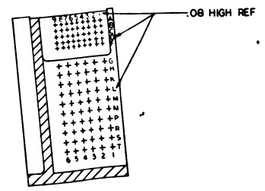








MARKING VIEWS



SECTION J-J

REV J THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB
CAMBRIDGE MASS.
DWG NO | CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN Brennan DATE 18 DEC 63
CHECKED R.R. Ramsbury 22 DEC 63
APPROVAL D. M. Hoag 17 FEB 64
APPROVAL —
NASA APPROVAL —
MIT APPROVAL —

FRAME, TRAY 5

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175
SCALE 1/1 | WT | SHEET 3 OF 3

1008175 C

REVISIONS				
DWG	DESCRIPTION	DATE	APPROVAL	
A	REVISED PER TDRR 06890			
B	REVISED PER TDRR 11322			
C	REVISED PER TDRR 11320			
D	REVISED PER TDRR 11321			

SECTION D-D

.005 MAX. ALLOWABLE STEP ABOVE SURFACE
STEP BELOW SURFACE NOT PERMITTED -D-

.12 R

.12 2 PLACES

.12 R

.100

.697 / .696

2.150 / 2.130

.748 / .746

30° TYP

.135 / .115 TYP

.270 / .260

.385 / .365

.110 / .090

.000 / .015 R

.570

.32

.0005 IN/IN -D-

.160

3.450

.710 / .690

.570

.100

.285

1.070 REF

.812

.618

1.625

1.237

CUTOUT THRU

.06 R TYP 4 PLACES

.100 TYP

.140 DIA
.250 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5°0'±0°15'

.040 / .060 TYP

30°

30°

.477

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.761

.125

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.125 MAX

-F-

-B-
⊥C.004

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON CUMULATIVE

.710 / .690

.072 / .073 DIA 45 HOLES

.427 / .427

.210

.12 TYP

.080

.005 R MAX PERMISSIBLE

BREAK EDGE THIS SIDE .08

12.970

CUTOUT THRU

.520 / .500

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

3.187

3.010 / 2.990

2.227

45° TYP

.125

.094 R

.155 / .145

9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE

.16 R 2 PLACES

.000 / .030 R

32

.005

-C-

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.062

.094 CUTOUT THRU

.12 3 PLACES

.125

.330 / .310

.005 MAX ALLOWABLE STEP ABOVE SURFACE, STEP BELOW SURFACE NOT PERMITTED -E-

.050

.094

.610 / .596

.030 R

.062 X 45° TYP

.595 DIM .575 FOR STEP ONLY

.188

.570 / .550

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

2.482 / 2.448

1.912

1.00

.040 X 45°±5° 2 PLACES BLEND WITH .12 R

.314 / .310

.576 / .572

#4-40 UNC-3B SEE NOTE 6

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000±.002 TOLERANCE NON-CUMULATIVE

.137 / .139 DIA 60 HOLES

.430 / .400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

BREAK 2 EDGES THIS SIDE .03

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C B A E E A B C

.40

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198
   DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO.1 & FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHRACTERS BLACK PER ND1002018 EXCEPT SURFACE D. AFTER PLATING ELECTRO CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN.

.186 / .180 DIA CSK 100° X .230 / .210

.228 / .226

5°0'±0°15'

SECTION A-A
2 PLACES

.250 / .246

2

.165 / .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 / .199 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.281

.250 / .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008175 -1	FRAME, TRAY	1

LIST OF MATERIALS

1007168 NEXT ASSY	USED ON APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ±.02 .XXX ±.005 ANGLES ±30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge Mass.
DRAWN J.D. Martin DATE 6/26/63
CHECKED —
APPROVAL —
APPROVAL D.H. Ford 6/26/63
NASA APPROVAL 7-27-68
MIT APPROVAL D. Wolf 7-30-68

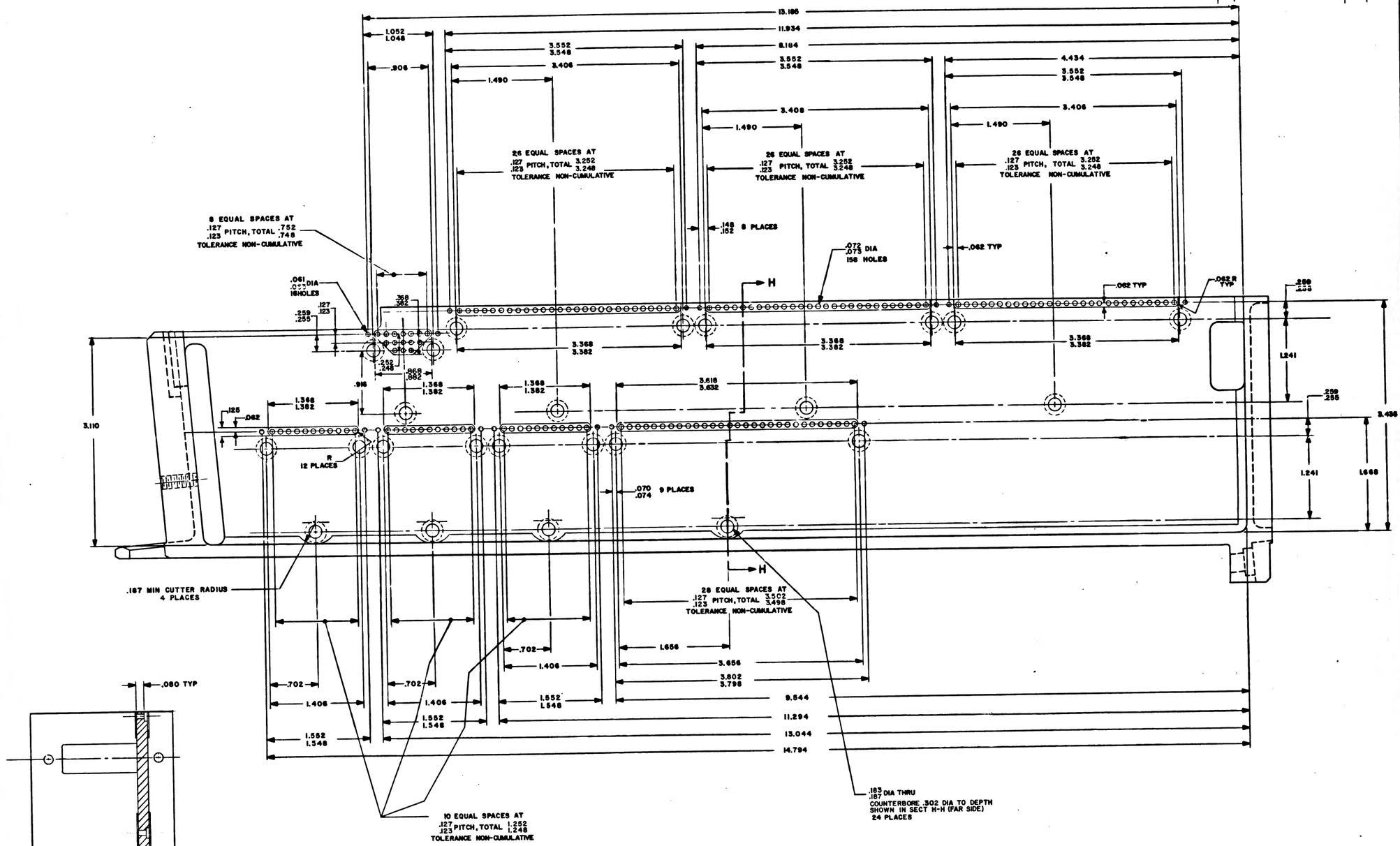
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 5

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008175
SCALE 1/1 | WT | SHEET 1 OF 3

1008175 D

REVISIONS TDRR 06545			
SYM	DESCRIPTION	DATE	BY / APPROVAL
A	REVISED PER TDRR 06545	26 JUL 66	
B	REVISED PER TDRR 11322	14 JUN 64	
C	REVISED PER TDRR 11320	18 JUL 64	
D	REVISED PER TDRR 11321	27 AUG 64	



VIEW B-B
SCALE: 2:1

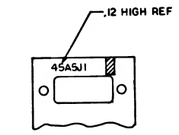
SECTION H-H

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

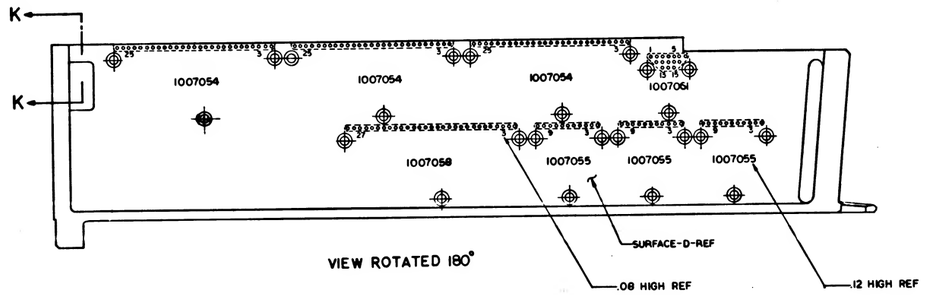
1007165		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	M.I.T. INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON	TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 .XX ±.02 .XXX ±.005 ± 30'	DRAWN J.J. Martin DATE 6/27/64	
APPLICATION		DO NOT SCALE THIS DRAWING	CHECKED	FRAME, TRAY 5
		MATERIAL —	APPROVAL	
		HEAT TREATMENT —	APPROVAL D. W. Hoover 6/27/64	
		FINAL FINISH —	NASA APPROVAL W. J. Hoover 7/27/64	CODE IDENT NO. SIZE E — NASA DRAWING NO. 1008175
			MIT APPROVAL	SCALE 2:1 WT SHEET 2 OF 3

1008175 D

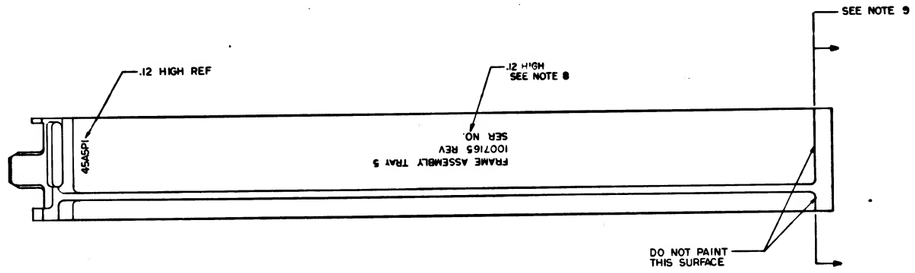
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 11322	[illegible]	[illegible]
C	REVISED PER TDRR 11320	[illegible]	[illegible]
D	REVISED PER TDRR 11321	[illegible]	[illegible]

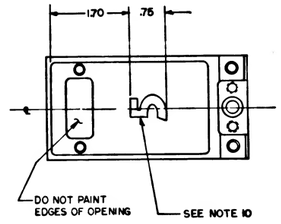


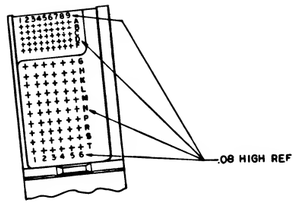
PARTIAL SECTION K-K

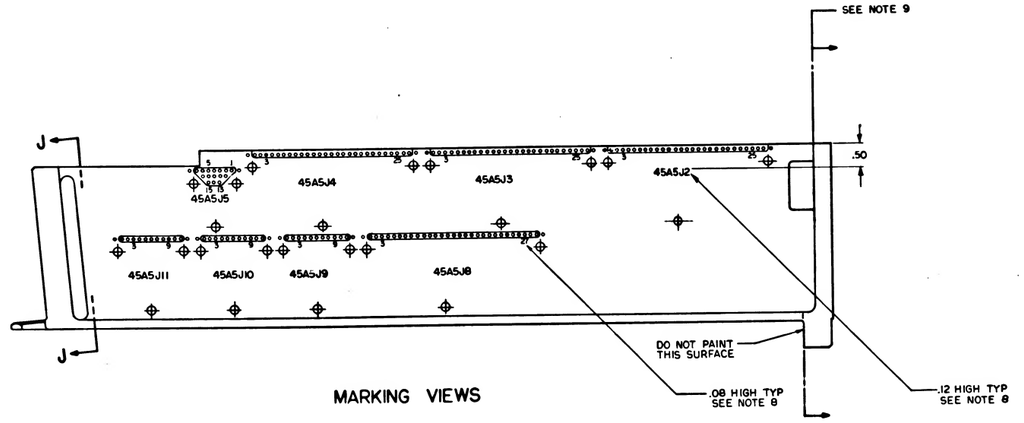


VIEW ROTATED 180°

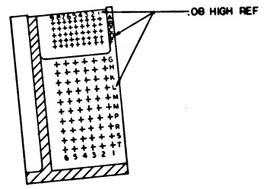








MARKING VIEWS



SECTION J-J

REV J THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

NEXT ASSY	USED ON	
APPLICATION		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
CONTRACT
DRAWN [illegible] DATE 18 DEC 0
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible] 18 Feb 64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 5

CODE IDENT NO	SIZE	NASA DRAWING NO.
	E	1008175
SCALE 1/1	WT	SHEET 3 OF 3

1008175 D

SECTION D-D

.005 MAX. ALLOWABLE STEP ABOVE SURFACE -F-
STEP BELOW SURFACE NOT PERMITTED

.12 2 PLACES

.12 R

.12 R

.100

.697 / .696

30° TYP

2.150 / 2.130

.748 / .746

.135 / .115 TYP

.270 / .260

.385 / .365

.110 / .090

.000 / .015 R

1.570

.32

-D-
.0005 IN/IN

.160

D

D

B

B

8.450

.710 / .680

.100

1.800

.570

.285

.100

CUTOUT THRU

.06 R TYP
4 PLACES

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA
.260 / .240 DIA SPOTFACE
2 HOLES

THIS EDGE OF CUTOUT TO BE FLUSH TO .010 MAX BELOW FLUSH WITH SURFACE -D-

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5° 0' ± 0° 15'

.040 / .060 TYP

30°

30°

.477

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.761

.125

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.125 MAX

-F-

-B-
⊥ C .004

4 EQUAL SPACES AT .125 ± .002
PITCH TOTAL .500 ± .002
TOLERANCE NON-CUMULATIVE

8 EQUAL SPACES AT .125 ± .002 PITCH
TOTAL 1.000 ± .002 TOLERANCE NON CUMULATIVE

.710 / .690

.072 / .073 DIA 45 HOLES
⌖ .004 DIA

.094 R

F

F

.156 / .146

9 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.800 ± .002 TOLERANCE NON-CUMULATIVE

1.912

.100

2.450 BSC

.040 / .060 x 45° ± 2°
2 PLACES
BLEND WITH .12 R

.312 BSC

#4-40 UNC-3B
TAP AFTER ANODIZING

.574 BSC

.197 / .198 DIA 60 HOLES
⌖ .004 DIA

5 EQUAL SPACES AT .200 ± .002 PITCH
TOTAL 1.000 ± .002
TOLERANCE NON-CUMULATIVE

.430 / .400

SECTION F-F

.447 / .427

.210

.080

.12 TYP

.005 R MAX PERMISSIBLE

3.187

3.010 / 2.990

.188

45° TYP

2.227

.200 / .030 R

32

-C-

.005

.16R
2 PLACES

.062

.094
CUTOUT THRU

.12
3 PLACES

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.125

.330 / .310

12.370

CUTOUT THRU

.520 / .500

.385 / .365

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

.030

G

G

.094

.610 / .596

.030 R

.062 x 45° TYP

.595 DIM
.575 FOR
STEP ONLY

.188

.570 / .550

.005 MAX ALLOWABLE STEP -E-
ABOVE SURFACE. STEP BELOW
SURFACE NOT PERMITTED

.125 DIA X .19 DEEP 2 PLACES
FOR MACHINING LOCATION

C
B
A
E
E
A
B
C

.406

.812

.562

1.135
1.125

.813
.811

1.625
1.623

1.070

2.150 REF
2.130

-F- -E-

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

.729 REF

16.7195
16.7165 (FROM GAGE POINT)

17.488
17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 - .015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED INSERT HOLES DURING PLATING
7. COAT FIND NO.1& FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.

.188 DIA
.190 CSK 100° x .230
.210

.228
.226

5° 0' ± 0° 15'

SECTION A-A
2 PLACES

.250
.246

2

.165 DIA THRU
.165

10-32UNF-2B THRU

82° ± 1° CSK, .199 DIA
.193

.005 DIA
SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP

.281

.250
.246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008175 -1	FRAME, TRAY	1

LIST OF MATERIALS

NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 XXX ± .005 ANGLES ± 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —0—
FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN D.D. Mallet DATE 6/4/68
CHECKED —
APPROVAL —
APPROVAL D.R. Knight 6/4/68
NASA APPROVAL T.J. Sefchek 6/4/68
MIT APPROVAL J. Ralph Weber

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

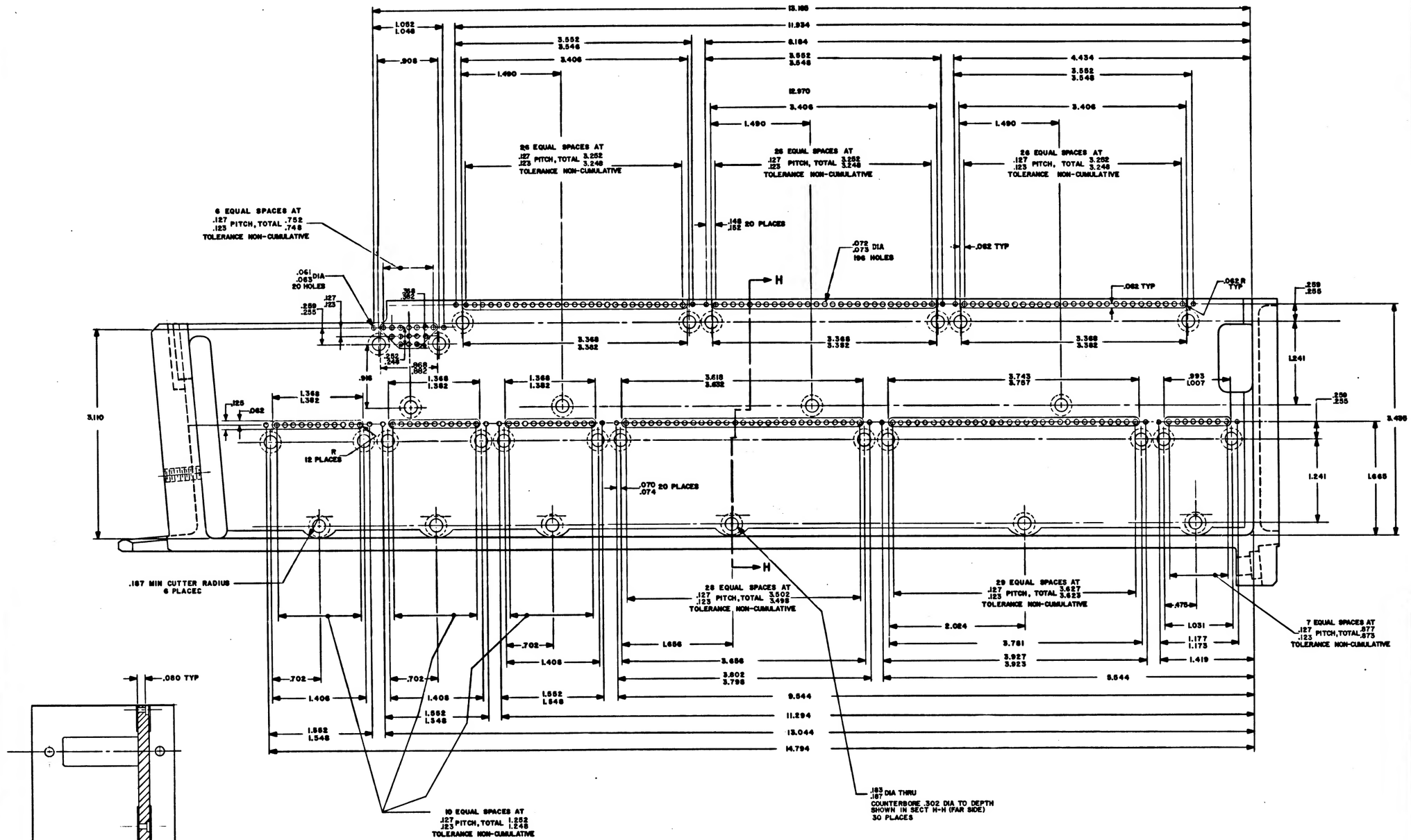
FRAME, TRAY 5

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008175

SCALE 1/1 | WT | SHEET 1 OF 2

1008175

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY



VIEW B-B
SCALE: 2:1

SECTION H-H

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 XX ±.02 .XXX ±.005 ± 30' DO NOT SCALE THIS DRAWING	MATERIAL —
	HEAT TREATMENT —
1007146 / NEXT ASSY / USED ON	FINISH —
APPLICATION	

M.I.T. INSTRUMENTATION LAB CAMBRIDGE, MASS.
DRAWN J.J. Martin DATE 9/24/64
CHECKED —
APPROVAL —
APPROVAL [illegible] 9/24/64
NASA APPROVAL [illegible] 12/27/65
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 5

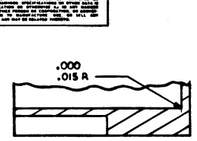
CODE IDENT NO. — SIZE E — NASA Drawing NO. 1008175
SCALE 2:1 — WT — SHEET 2 OF 2

1008175

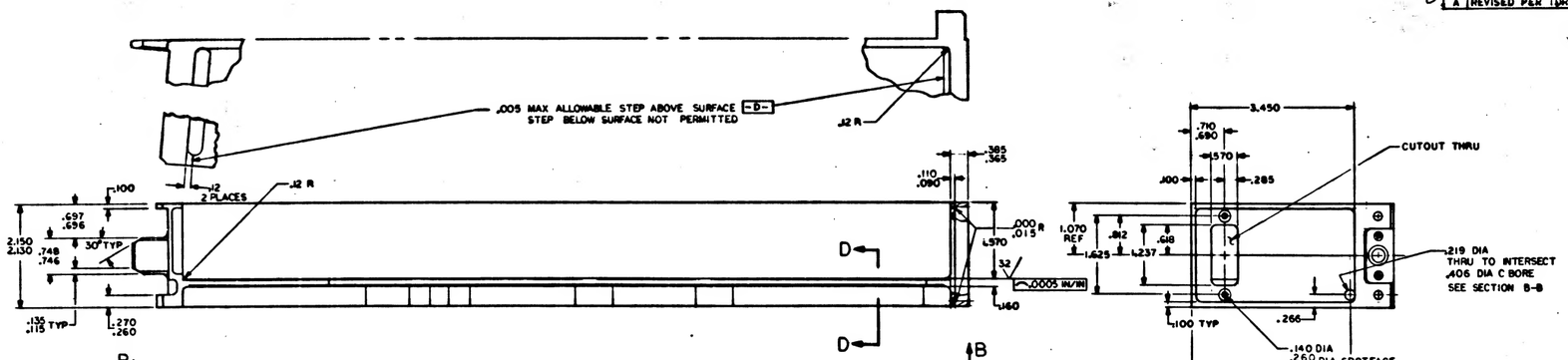
MASTER

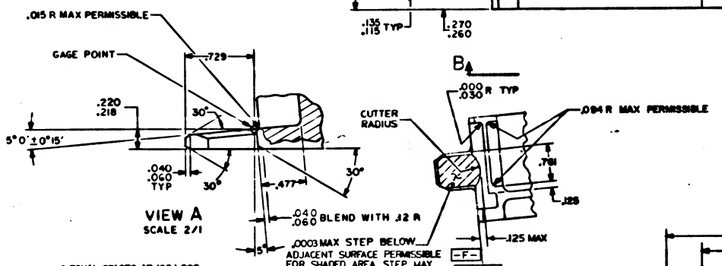
INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS				
ZONE	DESCRIPTION	DATE	APPROVAL	
A	REVISED PER TDHR			

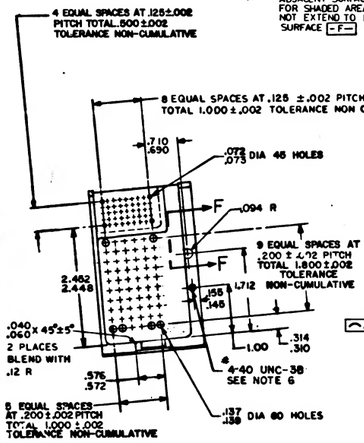


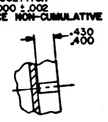
SECTION D-D



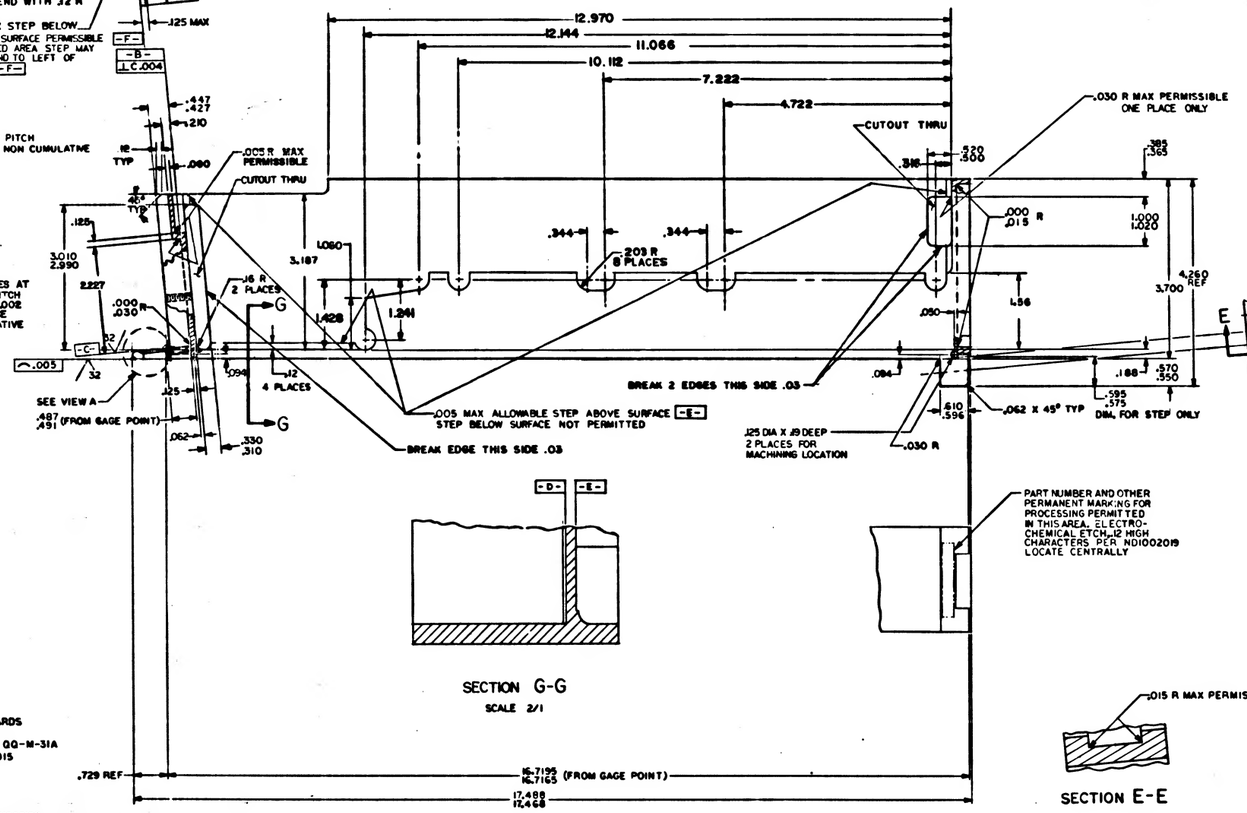


VIEW A
SCALE 2/1

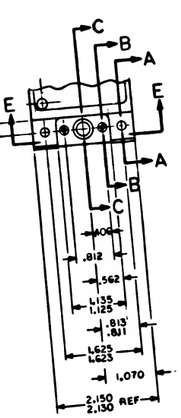




SECTION F-F

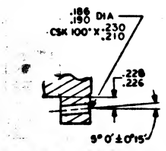


SECTION G-G
SCALE 2/1

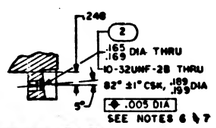


SECTION E-E

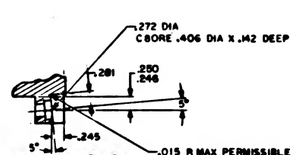
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH-ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NUMBERS 1 AND 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN
9. PAINT PER ND USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND USING 1010729-3. CHARACTER TO BE TYPE I PER ND 1002133. CENTRALIZE AS SHOWN



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008176 -1	FRAME, TRAY	1

LIST OF MATERIALS

NEXT ASSY	USED ON	APPLICATION	
1007166			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± XX ±.02 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB
DRAWN Ga Mental DATE 6/4/63
CHECKED
APPROVED
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 6

CODE IDENT NO. SIZE NASA DRAWING NO.
E 1008176
SCALE 1/1 WT SHEET 1 OF 3

1008176

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		

16 EQUAL SPACES AT .127 = 2.002 / .123 = 1.998
TOLERANCE NON-CUMULATIVE

24 EQUAL SPACES AT .127 = 3.002 / .123 = 2.998
TOLERANCE NON-CUMULATIVE

.072 / .073 DIA THRU
151 PLACES

.061 / .063 DIA THRU
16 PLACES

.183 / .187 DIA THRU
COUNTERBORE .302 DIA TO DEPTH SHOWN IN SECT H-H (FAR SIDE)
25 PLACES

.062 R
12 PLACES

.062 TYP

.062
5 PLACES

.074 / .070 7 PLACES

R
16 PLACES

.062

3 EQUAL SPACES
AT .127 = .377 / .123 = .373
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .127 = .502 / .123 = .498
TOLERANCE NON-CUMULATIVE

6 EQUAL SPACES AT .127 = .752 / .125 = .748
TOLERANCE NON-CUMULATIVE

15.144
11.144
7.644
4.144
3.435
3.110
1.685
.916
3.656
1.828
2.118 / 2.132
1.643
3.156
.743 / .757
1.743 / 1.757
.368 / .382
.493 / .507
.125
1.627 / 1.623
4.127 / 4.123
1.241
.259 / .255
.243 / .257
.127 / .123
.340 / .336
.252 / .248
.152 / .148
2.002 / 1.998
.074 / .070
1.078
2.156
2.546
2.377 / 2.373
2.302 / 2.298
.787
4.406
4.552 / 4.548
4.794
7.294
9.869
13.294

SECTION H-H

.080
5 PLACES
.080
.074 / .066

SECTION J-J

.080
7 PLACES
.860 TYP
4 PLACES
.606 DIA
4 PLACES

VIEW B B
SCALE ~ 2 : 1

VIEW C-C

.219 DIA
3 HOLES
.266

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± .02 DECIMALS .XX ± .02 .XXX ± .005 ANGLES ± 0°30' DO NOT SCALE THIS DRAWING	MATERIAL —
	HEAT TREATMENT —
	FINAL FINISH —
1007166 NEXT ASSY / USED ON APPLICATION	

M I T
INSTRUMENTATION LAB
Cambridge, Mass.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN D. J. Mueller DATE 1/6/66
CHECKED —
APPROVAL —
APPROVAL A. R. Hall 1/6/66

NASA APPROVAL [illegible] 1/27/66
MIT APPROVAL [illegible] 1/26/66

FRAME,
TRAY 6

CODE IDENT NO. —
SIZE E
NASA DRAWING NO. 1008176
SCALE 2 : 1
WT —
SHEET 2 OF 3

1008176

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR [illegible]	[illegible]	[illegible]

.12 HIGH REF

45A6J1

PARTIAL SECTION K-K

.12 HIGH REF

.08 HIGH REF

K

K

1007060 1007060 1007060 1007062

1007048 1007046 1007047 1007064

SURFACE-D-REF

VIEW ROTATED 180°

.12 HIGH REF

.12 HIGH SEE NOTE 8

FRAME ASSEMBLY TRAY 6 1007146 REV SER NO.

SEE NOTE 9

DO NOT PAINT THESE SURFACES OR EDGES OF OPENING

1.70 .75

SEE NOTE 10

.08 HIGH REF

J

J

.08 HIGH TYP SEE NOTE 8

.12 HIGH TYP SEE NOTE 8

1.80

SEE NOTE 9

45A6J5 45A6J4 45A6J3 45A6J2

45A6J9 45A6J8 45A6J7 45A6J6

DO NOT PAINT THIS SURFACE

MARKING VIEWS

.08 HIGH REF

SECTION J-J

REV L THIS SHEET ADDED

1008176 A

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

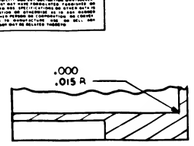
FRAME, TRAY 6

CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008176

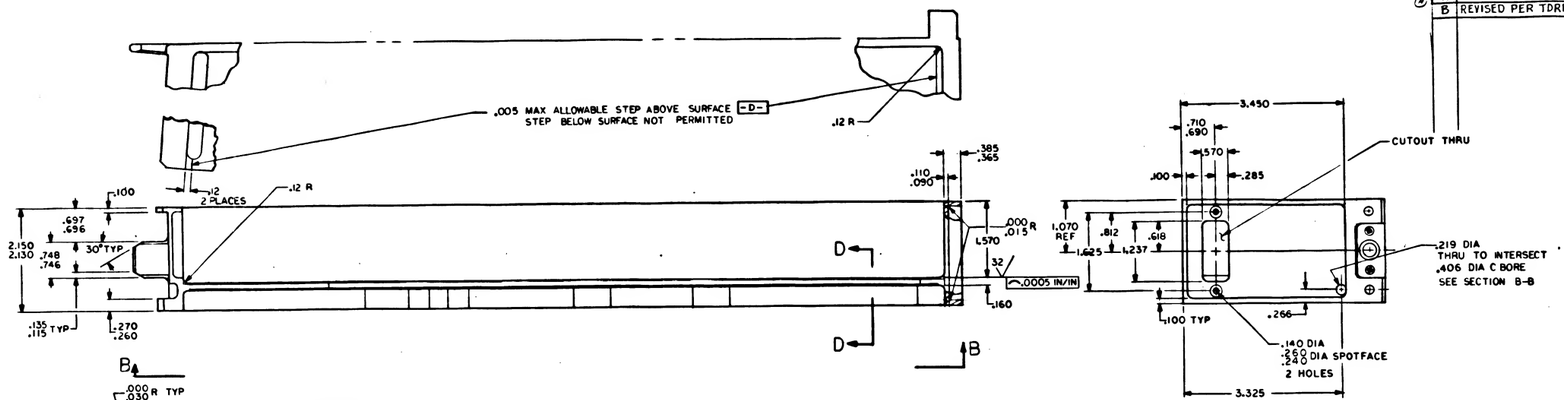
SCALE 1/1 | WT | SHEET 3 OF 3

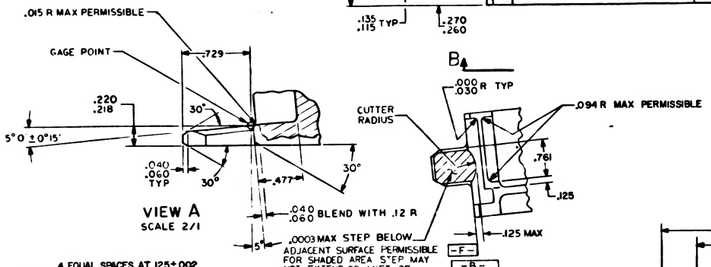
INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS				TDRR 68586
SYM	DESCRIPTION	DATE	APPROVAL	
A	REVISED PER TDRR [illegible]	[illegible]	[illegible]	
B	REVISED PER TDRR 11320	11-8-66	[illegible]	

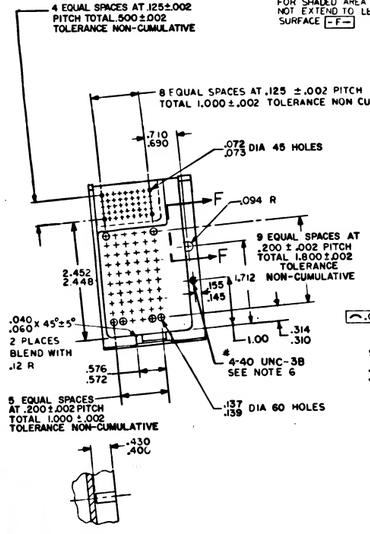


SECTION D-D

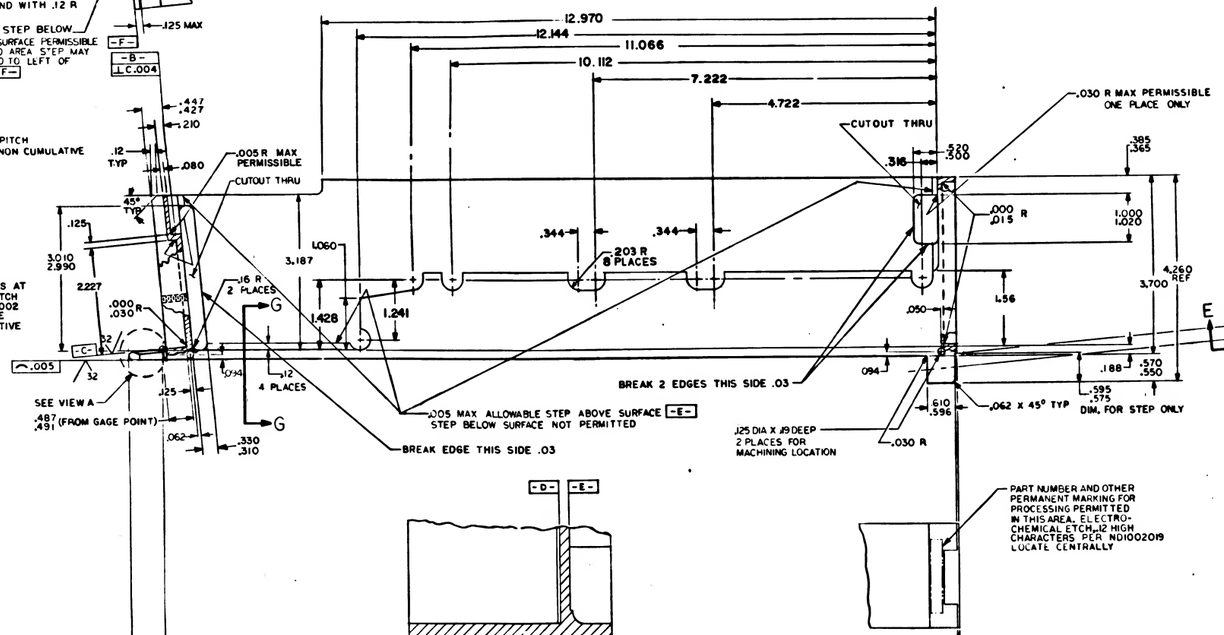




VIEW A
SCALE 2/1

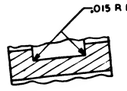


SECTION F-F



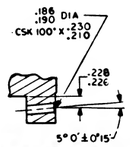
SECTION G-G
SCALE 2/1

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA, ELECTRO-CHEMICAL ETCH, .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

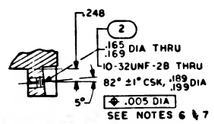


SECTION E-E

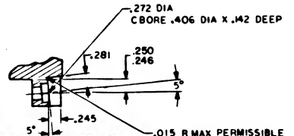
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002019 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH - EACH HOLE
7. COAT THREADS OF FIND NUMBERS 1 AND 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008176 -1	FRAME, TRAY	1

LIST OF MATERIALS

1007166		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
NEXT ASSY	USED ON	MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION		HEAT TREATMENT — FINAL FINISH SEE NOTE 6	DRAWN [illegible] DATE 9/28/65 CHECKED — APPROVAL — APPROVAL [illegible] 10/7/65 NASA APPROVAL [illegible] 11/17/65 MIT APPROVAL [illegible] 11/21/65

FRAME, TRAY 6

CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008176

SCALE 1/1 WT SHEET 1 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11320	8 AUG 68	

24 EQUAL SPACES AT .127 = 3.002 / .123 = 2.998
TOLERANCE NON-CUMULATIVE

16 EQUAL SPACES AT .127 = 2.002 / .123 = 1.998
TOLERANCE NON-CUMULATIVE

.072 / .073 DIA THRU 151 PLACES

.061 / .063 DIA THRU 16 PLACES

.183 / .187 DIA THRU COUNTERBORE .302 DIA TO DEPTH SHOWN IN SECT H-H (FAR SIDE) 25 PLACES

.062 R 12 PLACES

.062 TYP

.062 5 PLACES

.074 / .070 7 PLACES

R 16 PLACES

3 EQUAL SPACES AT .127 = .377 / .123 = .373
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

6 EQUAL SPACES AT .127 = .752 / .123 = .748
TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .127 = .502 / .123 = .498
TOLERANCE NON-CUMULATIVE

15.144
11.144
7.644
4.144
13.294
9.869
7.294
4.794
4.552 / 4.548
4.406
4.127 / 4.123
3.435
3.110
1.685
.916
.259 / .255
1.241
.125
.493 / .507
.062
.787
1.078
2.156
2.302 / 2.298
2.546
2.377 / 2.373
3.656
1.828
3.156
1.643
2.118 / 2.132
1.743 / 1.757
1.627 / 1.623
2.002 / 1.998
3.302 / 3.298
3.118 / 3.132
3.802 / 3.798
3.377 / 3.373
1.252 / 1.248
.368 / .382
.243 / .257
.127 / .123
.252 / .248
.152 / .148
.340 / .336
.743 / .757

.080 5 PLACES
.080
.074 / .066

SECTION H-H

.080 7 PLACES
.160 TYP 4 PLACES
.406 DIA 4 PLACES

SECTION J-J

VIEW B B
SCALE ~ 2:1

.219 DIA 3 HOLES
.266

VIEW C-C

Y OO	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
.XX ±.02 0-30'
.XXX ±.005
DO NOT SCALE THIS DRAWING
MATERIAL —H—
HEAT TREATMENT —H—
FINAL FINISH —H—
1007166 NEXT ASSY USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN J. Master DATE 26 Apr 62
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 1/27/67
MIT APPROVAL

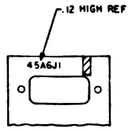
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 6

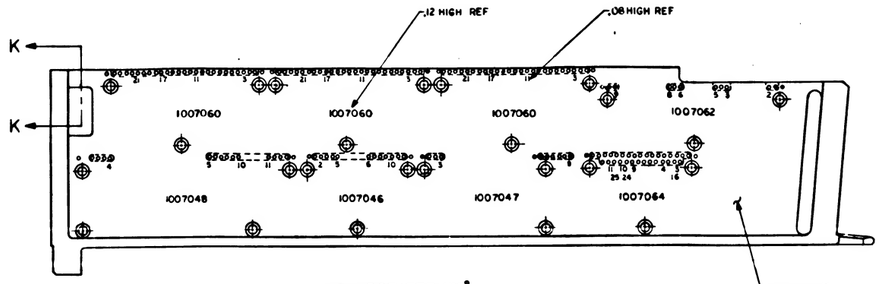
EDOE IDENT NO | SIZE E | NASA DRAWING NO 1008176
SCALE 2:1 | WT | SHEET 2 OF 3

1008176

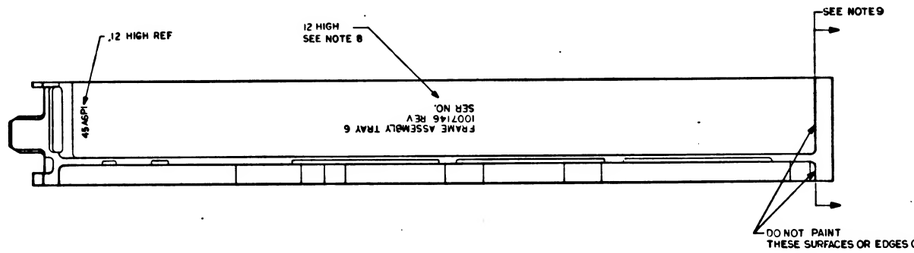
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 10424	4/6/67	GW
B	REVISED PER TDRR 11320	18 AUG 67	JWP

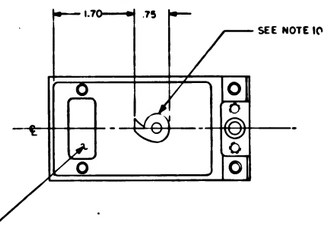


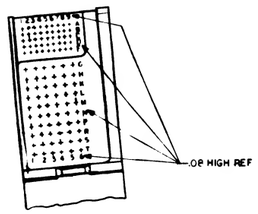
PARTIAL SECTION K-K

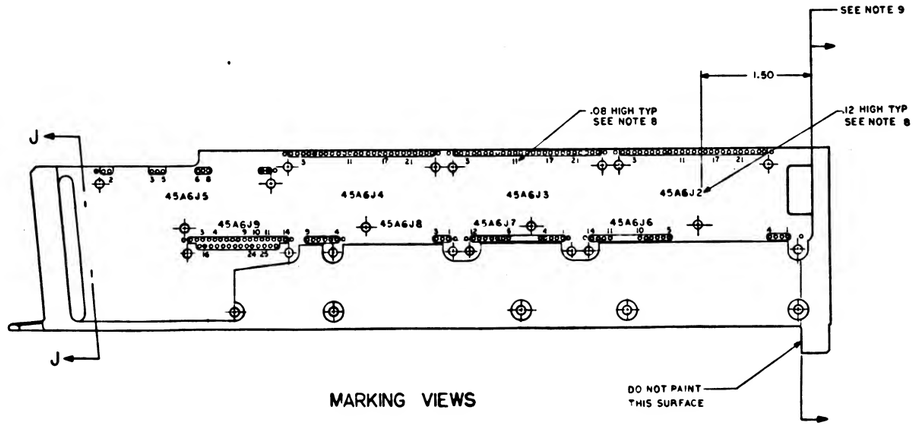


VIEW ROTATED 180°

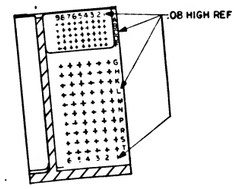








MARKING VIEWS



SECTION J-J

REV L THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± .XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY | USED ON
APPLICATION

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.
DRAWN [illegible] DATE 2/24/67
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL —
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME,
TRAY 6

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008176
SCALE 1/1 | WT | SHEET 3 OF 3

REVISIONS TDRR 12546			
SYM	DESCRIPTION	DATE	APPROVED
	REVISED PER TDRR 1107	11-7-67	WK
B	REVISED PER TDRR 11320	12-20-67	WK
C	REVISED PER TDRR 11321	1-3-68	WK

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.12 R

.385 .365

.110 .090

.000 .015 R

1.570

.32 .0005 IN/IN

.160

.100

.12 2 PLACES

.12 R

2.150 2.130

.697 .696

.748 .746

30° TYP

.135 .115 TYP

.270 .260

D

D

B

B

3.450

.710 .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.219 DIA THRU TO INTERSECT .406 DIA C BORE SEE SECTION B-B

.100 TYP

.266

.140 DIA .260 DIA SPOTFACE .240 2 HOLES

3.325

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

5°0 ±0°15'

.040 .060 TYP

30°

.477

30°

VIEW A
SCALE 2/1

CUTTER RADIUS

.000 .030 R TYP

.094 R MAX PERMISSIBLE

.761

.125

.125 MAX

.040 .060 BLEND WITH .12 R

5°

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

-B-
⊥C.004

4 EQUAL SPACES AT .125±.002
PITCH TOTAL .500±.002
TOLERANCE NON-CUMULATIVE

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000±.002 TOLERANCE NON CUMULATIVE

.710 .690

.072 .075 DIA 45 HOLES

F

.094 R

F

9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800±.002 TOLERANCE NON-CUMULATIVE

2.452 2.448

.155 .145

1.712

.040 X 45°±5° .060 2 PLACES BLEND WITH .12 R

1.00

.314 .310

4-40 UNC-3B SEE NOTE 6

.576 .572

.137 .139 DIA 60 HOLES

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.430 .400

SECTION F-F

.447 .427

.210

.12 TYP

.080

.005 R MAX PERMISSIBLE

CUTOUT THRU

45° TYP

.125

3.010 2.990

2.227

.005

32

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.062

.330 .310

.000 .030 R

.16 R 2 PLACES

G

G

1.428

1.241

.734

.12 4 PLACES

.125

12.970

12.144

11.066

10.112

7.222

4.722

.344

.344

.203 R 8 PLACES

3.187

4.060

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

BREAK EDGE THIS SIDE .03

BREAK 2 EDGES THIS SIDE .03

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

.030 R

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.316

.220 .300

.385 .365

.000 .015 R

1.000 1.020

1.56

.050

.094

.610 .596

.062 X 45° TYP

4.260 REF

3.700

.188

.570 .550

.595 .575

DIM. FOR STEP ONLY

C B A E E A B C

.406

.812

.562

1.135 1.125

.813 .811

1.625 1.623

1.070

2.150 2.130 REF

-D- -E-

SECTION G-G
SCALE 2/1

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NUMBERS 1 AND 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND 1002122. CENTRALIZE AS SHOWN

.186 DIA .190
CSK 100° X .230 .210

.228 .226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 DIA THRU .169

10-32UNF-2B THRU

82° ±1° CSK, .189 .195 DIA

.005 DIA

5°

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA CBORE .406 DIA X .142 DEEP

.281

.250 .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008176 -1	FRAME, TRAY	1

LIST OF MATERIALS

1007166 NEXT ASSY	USED ON APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN J. Martin DATE 12/5/67
CHECKED
APPROVAL
APPROVAL Robert Hoyle
NASA APPROVAL [signature] 12/27/67
MIT APPROVAL [signature]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 6

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008176

SCALE 1/1 | WT | SHEET 1 OF 3

1008176 C

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11322		
C	REVISED PER TDRR 11321		

24 EQUAL SPACES AT .127 = 3.002 / .123 = 2.998
TOLERANCE NON-CUMULATIVE

16 EQUAL SPACES AT .127 = 2.002 / .123 = 1.998
TOLERANCE NON-CUMULATIVE

.072 / .073 DIA THRU
151 PLACES

.061 / .063 DIA THRU
16 PLACES

.183 / .187 DIA THRU
COUNTERBORE .302 DIA TO DEPTH SHOWN IN SECT H-H (FAR SIDE)
25 PLACES

.062 R
12 PLACES

.062 TYP

.062
5 PLACES

.074 / .070 7 PLACES

R
16 PLACES

3 EQUAL SPACES AT .127 = .377 / .123 = .373
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

6 EQUAL SPACES AT .127 = .752 / .123 = .748
TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .127 = .502 / .123 = .498
TOLERANCE NON-CUMULATIVE

15.144
11.144
7.644
4.144
13.294
9.869
7.294
4.794
4.552 / 4.548
4.406
4.127 / 4.123
3.802 / 3.798
3.377 / 3.373
3.302 / 3.298
3.118 / 3.132
3.656
3.156
2.118 / 2.132
2.002 / 1.998
2.546
2.377 / 2.373
2.302 / 2.298
2.156
1.828
1.643
1.743 / 1.757
1.627 / 1.623
1.252 / 1.248
1.078
.787
3.435
3.110
1.685
.916
1.241
.259 / .255
.368 / .382
.340 / .336
.243 / .257
.127 / .123
.252 / .248
.152 / .148
.125
.493 / .507

VIEW B B
SCALE ~ 2 : 1

.080
5 PLACES

.080

.074 / .066

SECTION H-H

.080
7 PLACES

.160 TYP
4 PLACES

.406 DIA
4 PLACES

SECTION J-J

.219 DIA
3 HOLES

.266

VIEW C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ±.02 .XXX ±.005
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
ANGLES ±0°30'
1007166 | NEXT ASSY | USED ON | APPLICATION

M I T INSTRUMENTATION LAB Cambridge Mass.
DRAWN [illegible] DATE 1/26/65
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 1/27/65
MIT APPROVAL

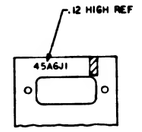
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 6

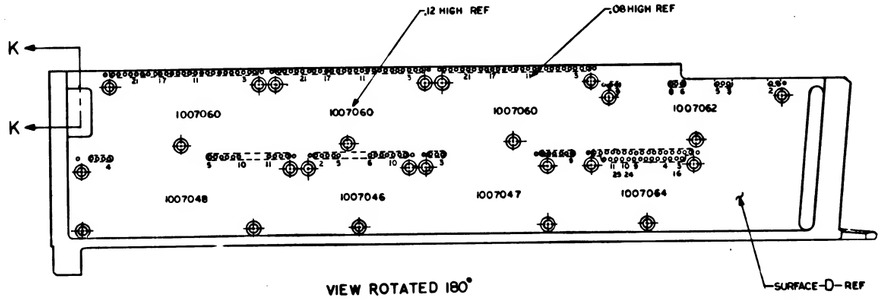
SCALE 2 : 1 | WT | SIZE E | CODE IDENT NO. | NASA DRAWING NO. 1008176 | SHEET 2 OF 3

1008176 C

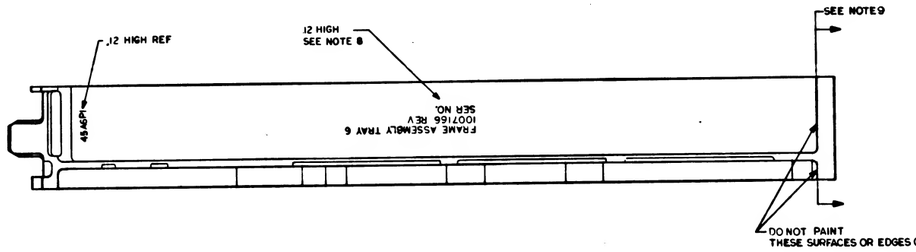
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR		
B	REVISED PER TDRR 11320	18 AUG 69	
C	REVISED PER TDRR 11321	21 AUG 69	

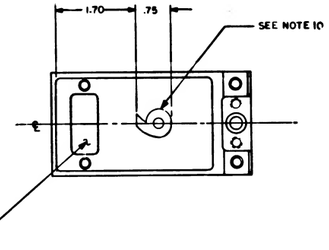


PARTIAL SECTION K-K

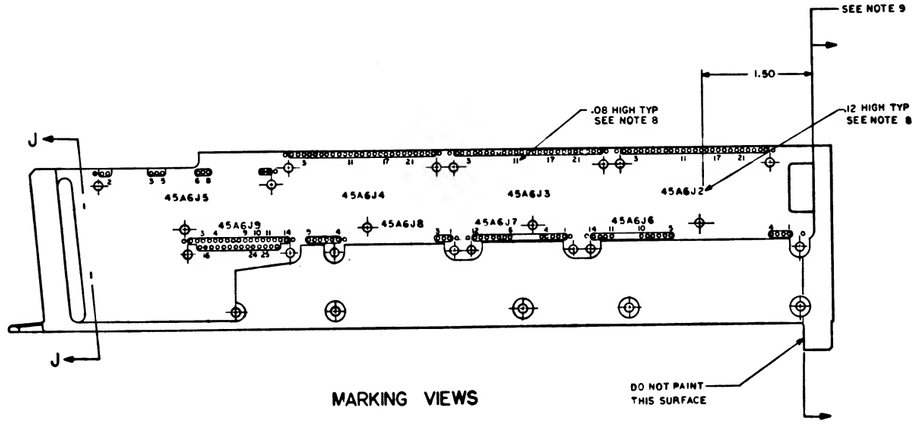


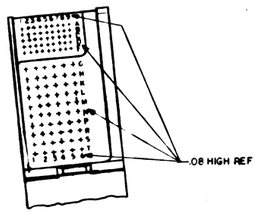
VIEW ROTATED 180°





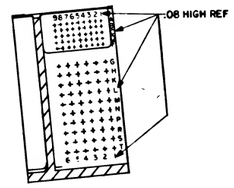
DO NOT PAINT
THESE SURFACES OR EDGES OF OPENING





MARKING VIEWS

DO NOT PAINT
THIS SURFACE



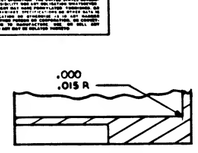
SECTION J-J

REV L THIS SHEET ADDED

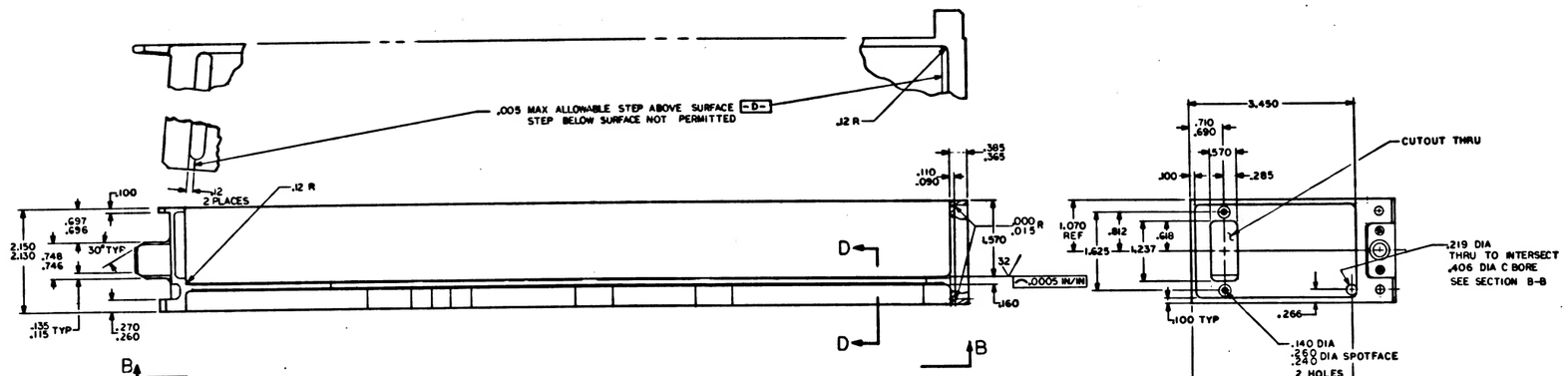
1008176 JC

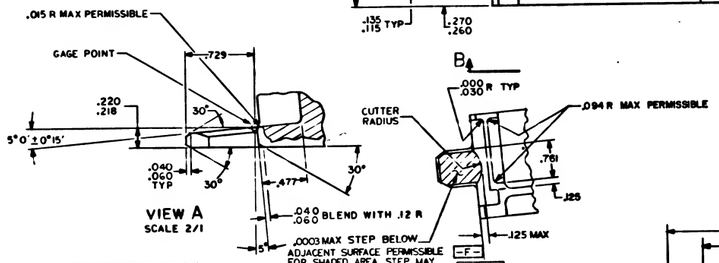
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINAL FINISH —	MIT INSTRUMENTATION LAB Cambridge Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
	DRAWN [illegible] DATE 7 MAR 69 CHECKED [illegible] APPROVAL [illegible] APPROVAL	FRAME, TRAY 6	
NEXT ASSY — USED ON — APPLICATION	NASA APPROVAL [illegible] MIT APPROVAL [illegible]	CODE IDENT NO. — SIZE E — NASA DRAWING NO 1008176	
		SCALE 1/1 — WT — SHEET 3 OF 3	

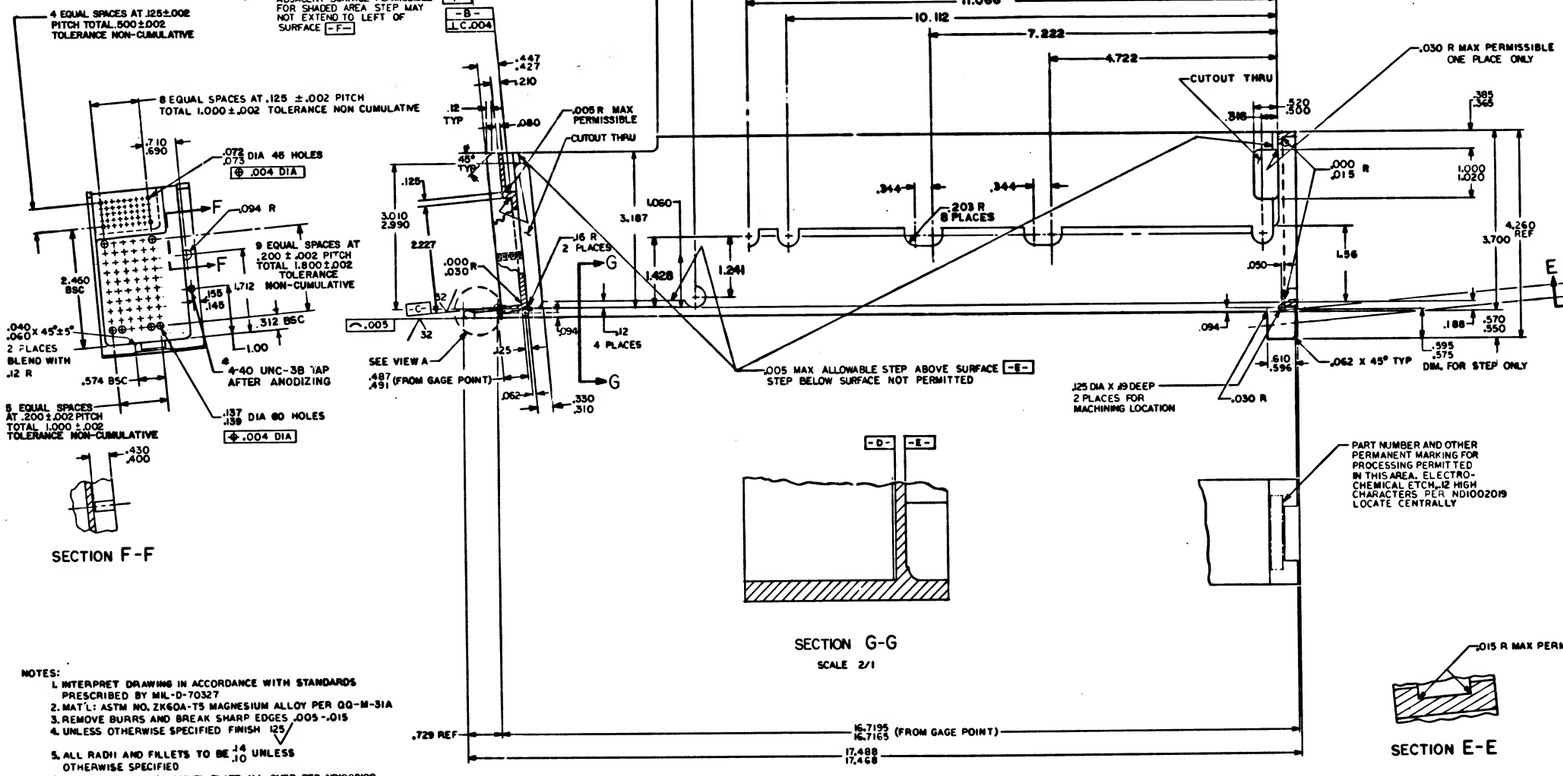


SECTION D-D





VIEW A
SCALE 2/1

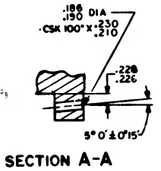


SECTION F-F

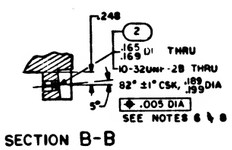
SECTION G-G
SCALE 2/1

SECTION E-E

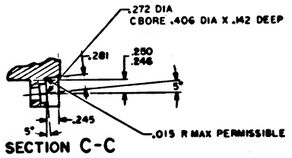
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH-ELECTROLESS NICKEL PLATE ALL OVER PER NDK02198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1& FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008176 -1	FRAME, TRAY	1

LIST OF MATERIALS

M I T INSTRUMENTATION LAB Cambridge, Mass.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 6

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
.X ±.1 .XX ±.02 ± 30'
.XXX ±.005
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

1007146 NEXT ASSY USED ON APPLICATION

DRAWN J.D. Martin DATE 4/4/66
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 1/27/67
M I T APPROVAL

CODE IDENT NO. SIZE E NASA DRAWING NO. 1008176
SCALE 1/1 WT SHEET 1 OF 2

1008176

PHOTOGRAPHIC SCALE ONLY

REVISIONS			
QTY	DESCRIPTION	DATE	APPROVAL

16 EQUAL SPACES AT .127 = 2.002 / .123 = 1.998
TOLERANCE NON-CUMULATIVE

24 EQUAL SPACES AT .127 = 3.002 / .123 = 2.996
TOLERANCE NON-CUMULATIVE

.072 / .073 DIA THRU 151 PLACES

.061 / .063 DIA THRU 16 PLACES

.183 / .187 DIA THRU COUNTERBORE .302 DIA TO DEPTH SHOWN IN SECT H-H (FAR SIDE) 25 PLACES

.062 R 12 PLACES

.062 5 PLACES

.062 TYP

.074 / .070 7 PLACES

R 16 PLACES

13 EQUAL SPACES AT .127 = 1.627 / .123 = 1.623
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

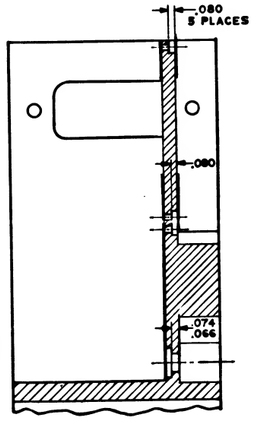
5 EQUAL SPACES AT .127 = .627 / .123 = .623
TOLERANCE NON-CUMULATIVE

3 EQUAL SPACES AT .127 = .377 / .123 = .373
TOLERANCE NON-CUMULATIVE

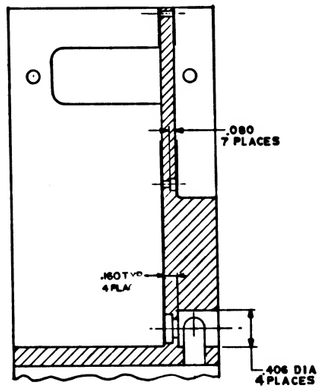
4 EQUAL SPACES AT .127 = .502 / .123 = .498
TOLERANCE NON-CUMULATIVE

6 EQUAL SPACES AT .127 = .752 / .123 = .748
TOLERANCE NON-CUMULATIVE

15.144
11.144
7.644
4.144
13.294
9.869
7.294
4.794
4.406
4.552 / 4.548
4.127 / 4.123
3.802 / 3.798
3.377 / 3.373
3.302 / 3.298
3.118 / 3.132
2.002 / 1.998
2.118 / 2.132
2.546
2.377 / 2.373
2.302 / 2.298
2.156
1.743 / 1.757
1.627 / 1.623
1.643
1.252 / 1.248
1.078
.787
3.438
3.110
1.685
1.241
.916
.259 / .255
.493 / .507
.125
.062

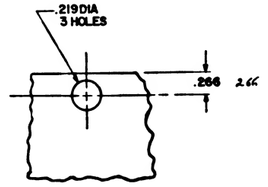


SECTION H-H



SECTION J-J

VIEW B B
SCALE ~ 2 : 1



VIEW C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007146	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ± .02 XXX ± .005 ANGLES ± 0°30' DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINAL FINISH —	M I T INSTRUMENTATION LAB Cambridge, Mass. — MANNED SPACECRAFT CENTER HOUSTON, TEXAS DRAWN D. J. Hamilton DATE 7/27/65 CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL FRAME, TRAY 6 CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008176 SCALE 2 : 1 — WT — SHEET 2 OF 2
NEXT ASSY	APPLICATION		

1008176

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS TDRR 0485 #3			
DASH	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06487	5/6/69	

SECTION D-D

.030 MAX PERMISSIBLE

.008 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED.

.12 R
2 PLACES

.12 R

.100

.697 / .696

30° TYP

2.150 / 2.130

.748 / .746

.135 / .115 TYP

1.270 / .260

.385 / .365

.110 / .090

.000 R / .015

D

D

1.570

32

.0005 IN/IN

.160

3.450

2.344

.710 / .690

1.570

.300

.285

CUTOUT THRU
2 PLACES

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA THRU
2 PLACES

2.250

.140 DIA
.260 / .240 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5°0'±0°15'

.040 / .060 TYP

30°

30°

.477

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.125 MAX

-F-

-B-

⊥C .004

.0003 MAX STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.072 / .073 DIA THRU 46 HOLES

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.710 / .690

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

.094R

F

9 EQUAL SPACES AT .200
PITCH TOTAL 1.800 ±.002
TOLERANCE NON-CUMULATIVE

2.482 / 2.448

.156 / .148

L.562

1.00

.314 / .310

.040 / .060 x 45°±5°
2 PLACES
BLEND WITH
.12 R

.576 / .572

4-40 UNC-3B
SEE NOTE 6

5 EQUAL SPACES AT .200 ±.002
PITCH TOTAL 1.000 ±.002
TOLERANCE NON-CUMULATIVE

.137 / .189 DIA 60 HOLES

.430 / .400

SECTION F-F

.210

.447 / .427

.080

.330 / .310

.18 TYP

45° TYP

.008 R MAX PERMISSIBLE

BREAK EDGE THIS SIDE .03

CUTOUT THRU

.125

3.010 / 2.990

2.227

.000 / .030 R

.18R
2 PLACES

-C-

.005

32

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.062

.094

.12
3 PLACES

.125

G

G

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED.

BREAK 4 EDGES THIS SIDE .03

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

.520 / .500
2 PLACES

.385 / .365

2.220 / 2.240

1.000 / 1.020
2 PLACES

.1218

.000 R / .018

4.260 REF

3.700

.050

.125 DIA X .19 DEEP
2 PLACES FOR
MACHINING LOCATION

.094

.188

.570 / .550

.595 / .575 DIM.
FOR STEP ONLY

.610 / .596

.062 x 45° TYP

.030 R

-D- -E-

SECTION G - G
SCALE 2/1

PART NO. AND OTHER PERMANENT
MARKING FOR PROCESSING PERMITTED
IN THIS AREA. ELECTRO-CHEMICAL ETCH
.12 HIGH CHARACTERS PER ND1002019
LOCATE CENTRALLY

C B A E E A B C

.406

.812

.562

1.135 / 1.125

1.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER MD USING 1010728-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER MD USING 1010729-3. CHARACTER TO BE TYPE I PER ND1002122, CENTRALIZE AS SHOWN.

.186 / .190 DIA
CSK .230 X 100°
.210

.228 / .226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 / .169 DIA THRU
10-32UNF-2B THRU

82° ±1° CSK, .189 / .199 DIA

.005 DIA
SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.281

.250 / .246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

1007167			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/64 DECIMALS .XX ±.02 .XXX ±.005 ANGLES 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN MAR 6-67 DATE MAY 66
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 11/14/67
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 7

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008177
SCALE 1/1 | WT | SHEET 1 OF 3

1008177 A

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

REVISIONS TDR 03541			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDAR 0648P7	3-6-68	WLC

VIEW B-B

PARTIAL SECTION
H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

MIT INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN [illegible] DATE 3-6-68	FRAME, TRAY 7
CHECKED	
APPROVAL	
APPROVAL	
NASA APPROVAL	
MIT APPROVAL	CODE IDENT NO. / SIZE E / NASA DRAWING NO. 1008177
SCALE 2/1	WT / SHEET 2 OF 3

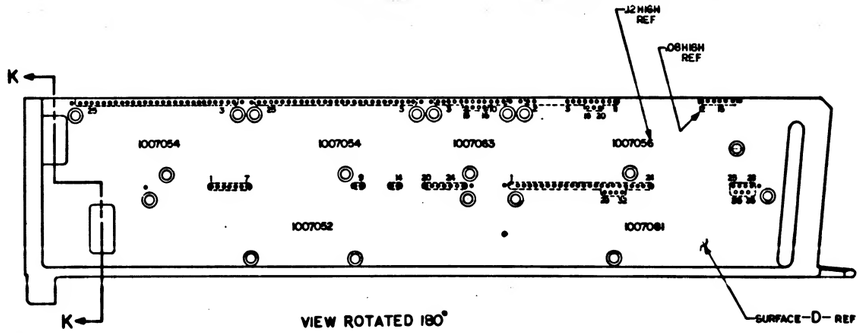
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY / USED ON / APPLICATION

MASTER

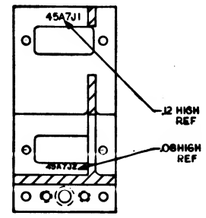
1008177 A

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

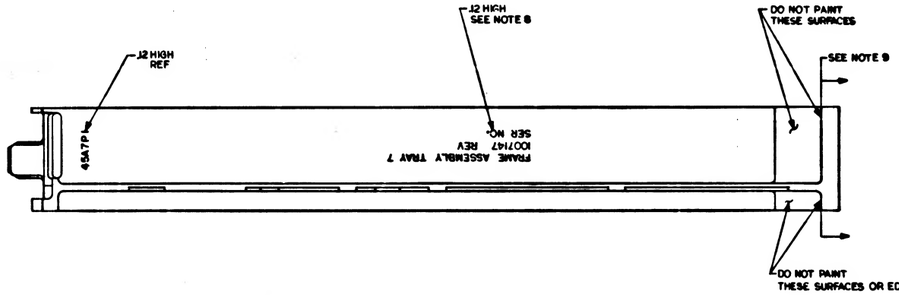
REVISIONS			
DIM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 66487		MC W.K

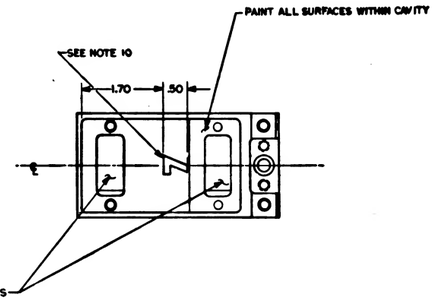


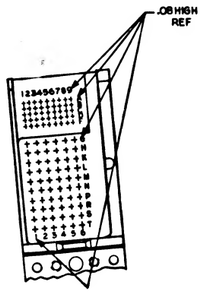
VIEW ROTATED 180°

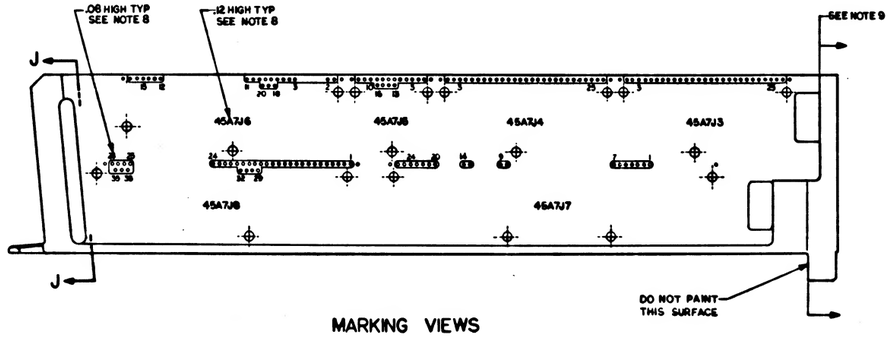


SECTION K-K

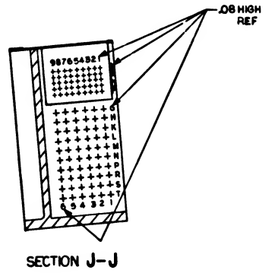








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MAT'L/SPEC	MIT INSTRUMENTATION LAB CAMBRIDGE, MASSACHUSETTS DRAWN DATE DEC 1968 CHECKED APPROVED APPROVAL RASA APPROVAL MIT APPROVAL
		HEAT TREATMENT FINISH	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON		FRAME, TRAY 7
APPLICATION			CODE IDENT NO. SIZE E RASA DRAWING NO. 1008177
			SCALE 1/1 WT SHEET 3 OF 3

1008177 A

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR 07134	10 APR 64	[illegible]

SECTION D-D

.030 MAX PERMISSIBLE

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED.

.12 R

.12 R 2 PLACES

.12 R

.000 R
.015

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

.000 R TYP
.030

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.0003 MAX STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.072 DIA THRU 45 HOLES
.073

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT .200
PITCH TOTAL 1.800 ±.002
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .200
PITCH TOTAL 1.000 ±.002
TOLERANCE NON-CUMULATIVE

.040 x 45° ±5°
.060
2 PLACES
BLEND WITH
.12 R

#4-40 UNC-3B
SEE NOTE 6

.137
.139 DIA 60 HOLES

SECTION F-F

CUTOUT THRU

.005 R MAX PERMISSIBLE

BREAK EDGE THIS SIDE .03

.16R
2 PLACES

SEE VIEW A

.487
.491 (FROM GAGE POINT)

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PRMITTED.

SECTION G - G
SCALE 2/1

BREAK 4 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

.125 DIA X .19 DEEP
2 PLACES FOR
MACHINING LOCATION

.030 R

.062 x 45° TYP

.595
.575 DIM.
FOR STEP ONLY

PART NO. AND OTHER PERMANENT
MARKING FOR PROCESSING PERMITTED
IN THIS AREA. ELECTRO-CHEMICAL ETCH
.12 HIGH CHARACTERS PER ND1002018
LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

15.7195
15.7165 (FROM GAGE POINT)

17.488
17.468

.188 DIA
.190
CSK 100° X .230
.210

.228
.226

5° 0' ±0°15'

SECTION A-A
2 PLACES

.248

2

.165
.169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189
.199 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.281

.250
.246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

3.450
2.344

.710
.690

.570

.285

.100

1.070
REF

.812

.618

1.237

1.625

CUTOUT THRU
2 PLACES

.100 TYP

.140 DIA THRU
2 PLACES

2.250

.140 DIA
.260
.240 DIA SPOTFACE
2 HOLES

.385
.365

.110
.090

.570

.32

.005 M/M

.160

.135
.115 TYP

1.270
1.260

2.150
2.130

.697
.696

.748
.746

.100

30° TYP

D

D

1.220
2.240

.220
.500
2 PLACES

1.000
1.020
2 PLACES

.218

1.218

.000 R
.018

3.700

4.260
REF

.050

.094

.810
.596

.188

.570
.550

.040

.812

.562

L.135
L.125

.813
.811

L.625
L.623

1.070

2.150
2.130 REF

B	A	A
A	A	A
SHEET 1	SHEET 2	SHEET 3
REVISION STATUS OF SHEETS		

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THOSE OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND USING 1010729-3. CHARACTER TO BE TYPE I PER ND1002122, CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

1007167		
NEXT ASSY	USED ON	
APPLICATION		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
2 XX ±.02
XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINAL FINISH
SEE NOTE 6

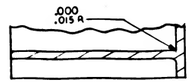
MIT INSTRUMENTATION LAB
CAMBRIDGE MASS.
DRAWN [illegible] DATE 1-10-64
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

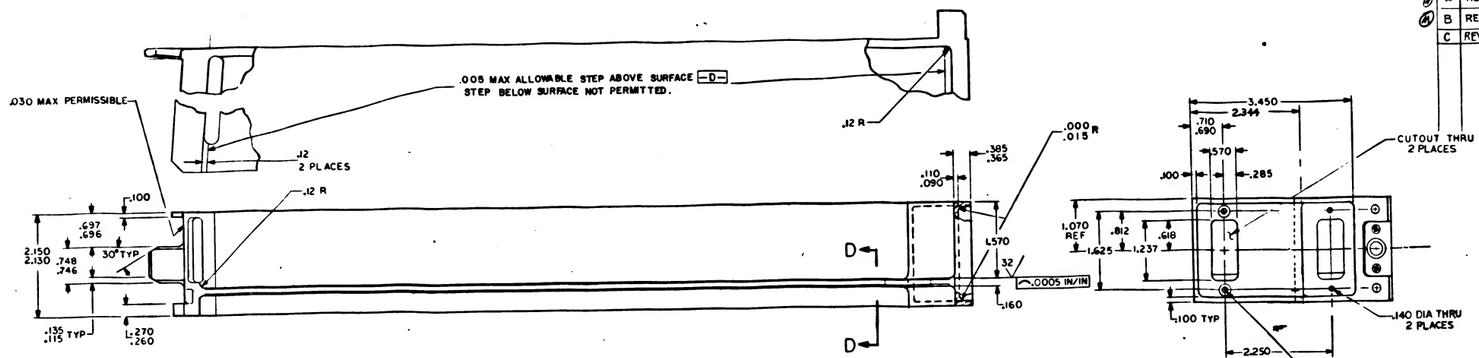
FRAME,
TRAY 7

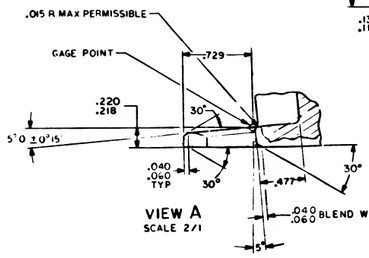
CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008177
SCALE 1/1	WT	SHEET 1 OF 3

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06417	4 APR 64	WH
B	REVISED PER TDRR 07134	10 APR 64	JJ
C	REVISED PER TDRR 11320	8 AUG 64	JJ

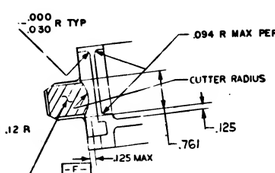


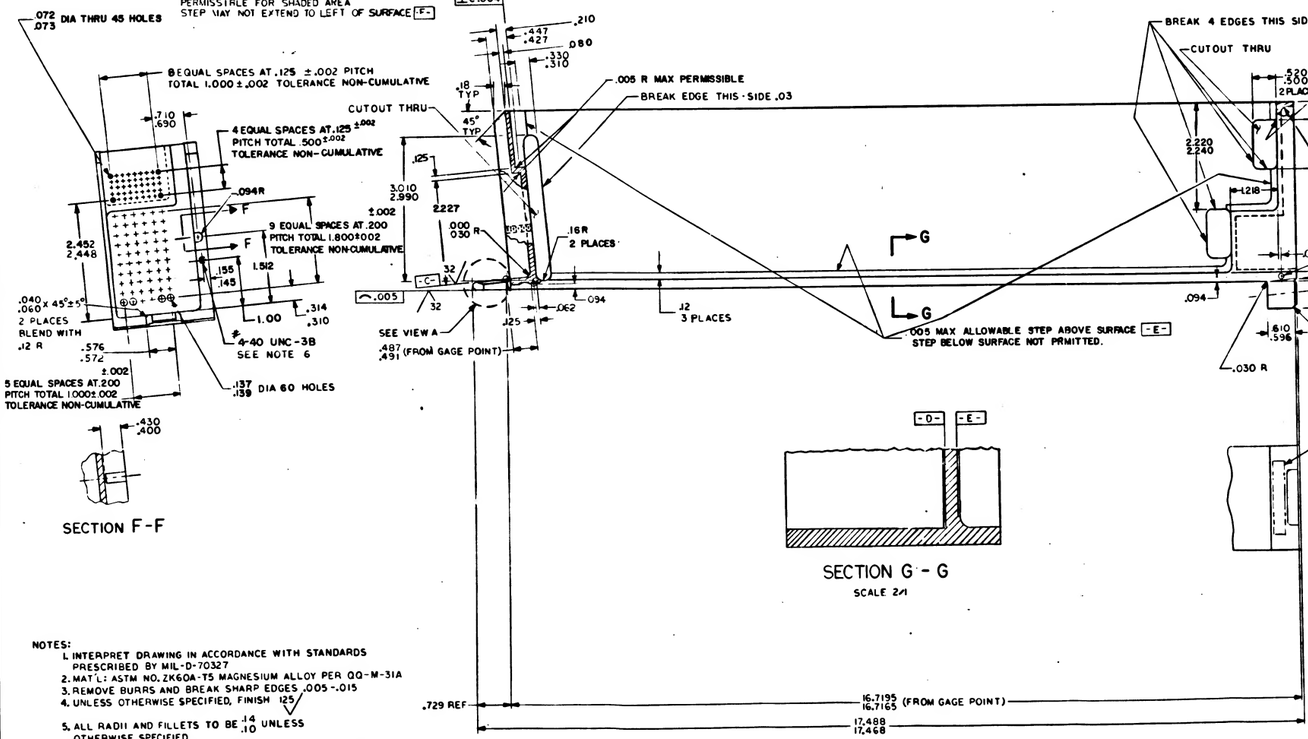
SECTION D-D

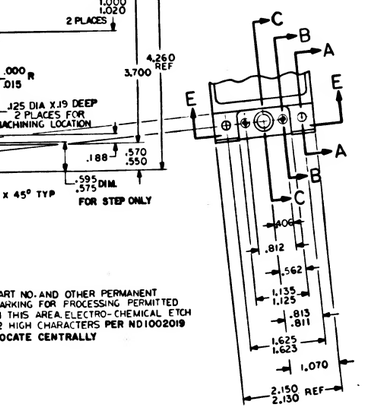




VIEW A
SCALE 2/1

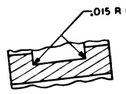




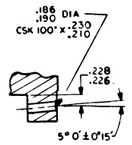


SECTION F-F

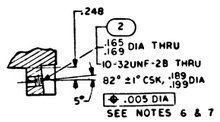
SECTION G-G
SCALE 2/1



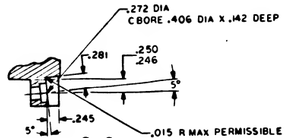
SECTION E-E



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

1007167	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
.XX ±.02
.XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

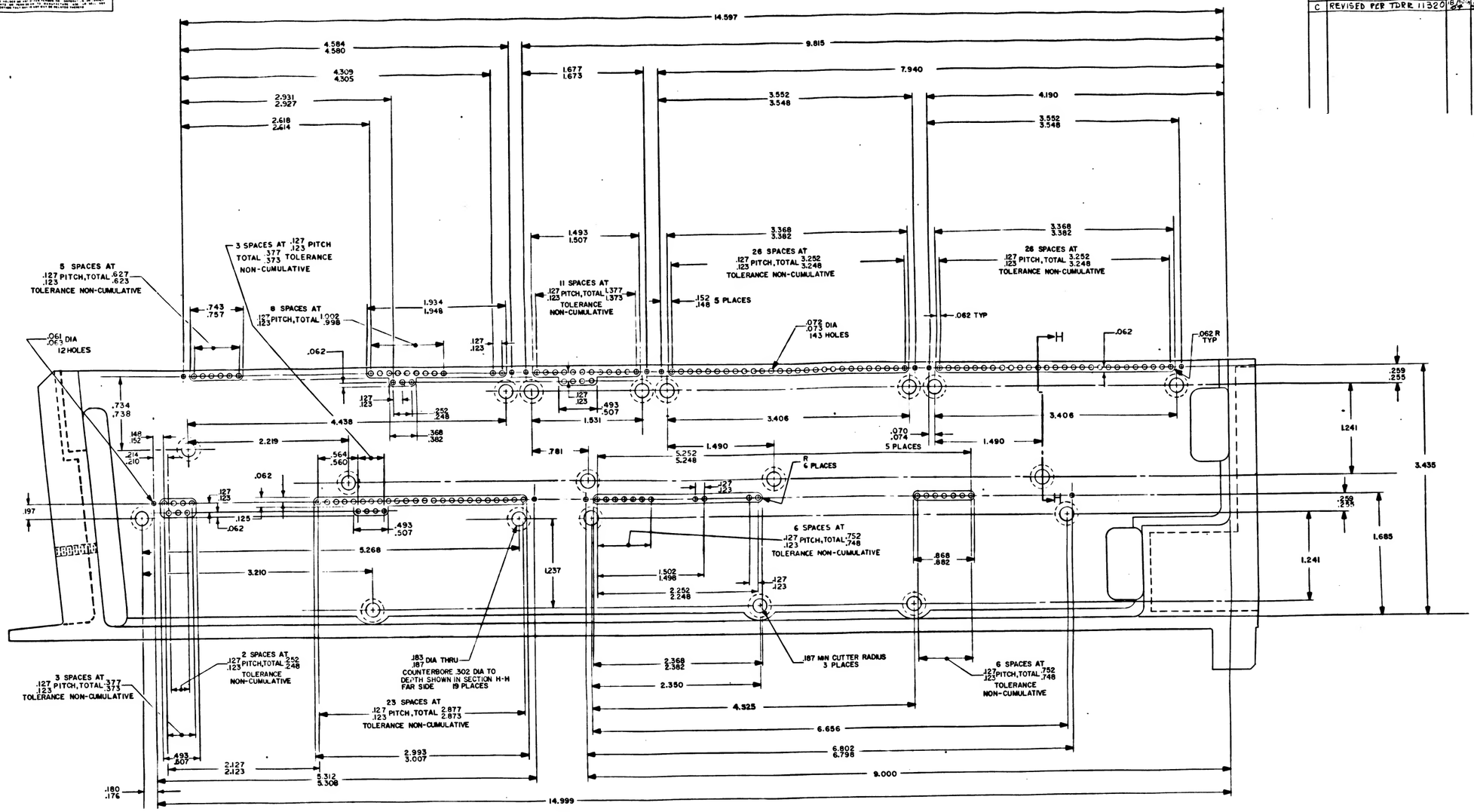
MIT INSTRUMENTATION LAB
CAMBRIDGE MASS
DSR 70 CONTRACT NAS 9-150
DRAWN MAR 7-64 DATE 1-14-64
CHECKED
APPROVAL W. H. Tschudi 1-14-64
NASA APPROVAL 1/14/64
MIT APPROVAL D. H. Hoyt 1-14-64

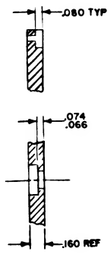
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 7

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008177
SCALE 1/1 | WT | SHEET 1 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 11477	5/1/67	WK
B	REVISED PER TDRR 07134	10 APR 68	WK
C	REVISED PER TDRR 11320	8/14/68	WK





VIEW B-B

PARTIAL SECTION
H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

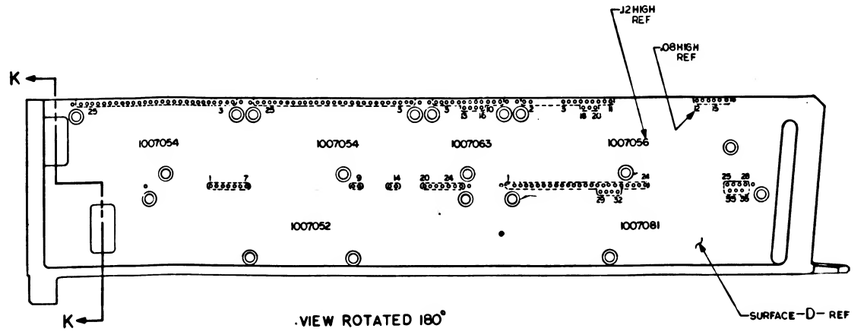
M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN KAMRAN DATE 4/4/67
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

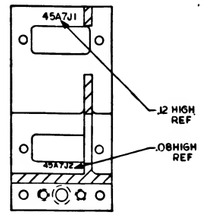
FRAME, TRAY 7

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008177
SCALE 2/1 | WT | SHEET 2 OF 3

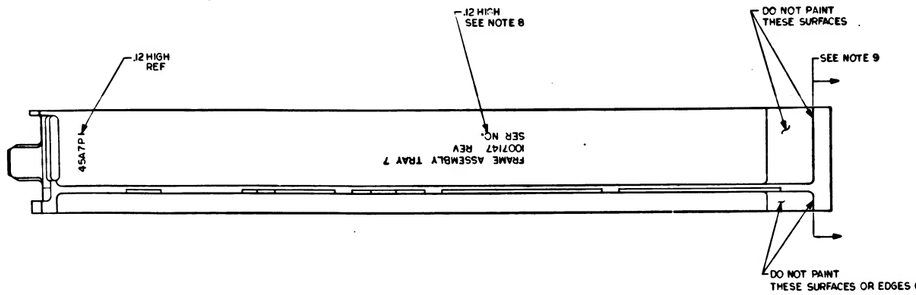
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 12047		JRK
B	REVISED PER TDRR 07134	10 AUG 64	JJJ
C	REVISED PER TDRR 11320	18 AUG 64	LWK

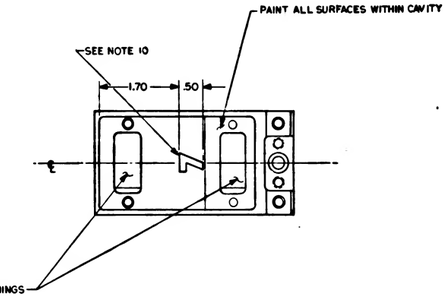


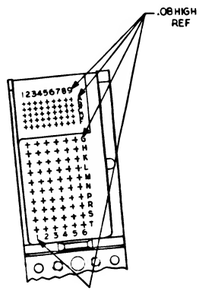
VIEW ROTATED 180°

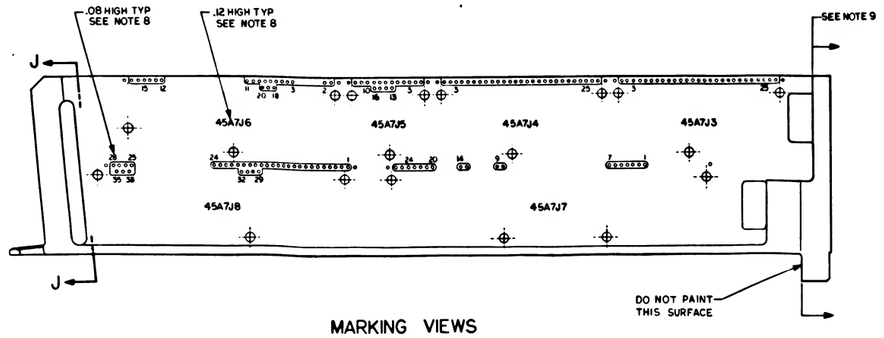


SECTION K-K

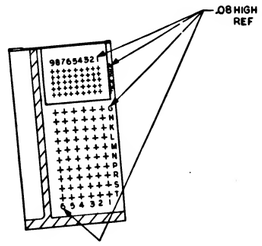








MARKING VIEWS



SECTION J-J

REV / THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

NEXT ASSY	USED ON	APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
.X ± .02 °
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.

DRAWN [illegible] DATE DEC 1965
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL —
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME, TRAY 7

CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008177

SCALE 1/1 WT SHEET 3 OF 3

J 278001

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06617	7 FEB 64	WR
B	REVISED PER TDRR 07134	6 APR 64	JJJ
C	REVISED PER TDRR 11320	8 JUL 64	
D	REVISED PER TDRR 11321	17 AUG 64	

SECTION D-D

.030 MAX PERMISSIBLE

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED.

.12 R

.12
2 PLACES

.12 R

.000 R
.015

.385
.365

.110
.090

.0005 IN/IN

.160

.32

1.570

CUTOUT THRU
2 PLACES

.140 DIA THRU
2 PLACES

.140 DIA
.260 DIA SPOTFACE
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

.000 R TYP
.030

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.0003 MAX STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-
-B-
⊥C.004

.072 DIA THRU 45 HOLES
.073

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT .200
PITCH TOTAL 1.800±002
TOLERANCE NON-CUMULATIVE

5 EQUAL SPACES AT .200
PITCH TOTAL 1.000±.002
TOLERANCE NON-CUMULATIVE

.040 x 45°±5°
.060
2 PLACES
BLEND WITH
.12 R

4-40 UNC-3B
SEE NOTE 6

.137
.139 DIA 60 HOLES

CUTOUT THRU

.005 R MAX PERMISSIBLE

BREAK EDGE THIS SIDE .03

45° TYP

.16R
2 PLACES

.005

SEE VIEW A

.487
.491 (FROM GAGE POINT)

.062

.094

.12
3 PLACES

-G-

-G-

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED.

.030 R

.062 x 45° TYP

.610
.596

BREAK 4 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

.520
.500
2 PLACES

.125 DIA X .19 DEEP
2 PLACES FOR
MACHINING LOCATION

.595
.575 DIM.
FOR STEP ONLY

PART NO. AND OTHER PERMANENT
MARKING FOR PROCESSING PERMITTED
IN THIS AREA. ELECTRO-CHEMICAL ETCH
.12 HIGH CHARACTERS PER ND1002019
LOCATE CENTRALLY

SECTION F-F

SECTION G - G
SCALE 2/1

SECTION E-E

.729 REF

16.7195
16.7165 (FROM GAGE POINT)

17.488
17.468

.186 DIA
.190
CSK 100° X .230
.210

.228
.226

5° 0' ±0° 15'

SECTION A-A
2 PLACES

.248

2

.165
.169 DIA THRU
10-32UNF-2B THRU

82° ±1° CSK, .189
.193 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.281

.250
.246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

NEXT ASSY	10071-7
USED ON	
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
.XX ±.02
.XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
—H—
FINAL FINISH
SEE NOTE 6

INSTRUMENTATION LAB
Cambridge Mass
DRAWN MAP/RW DATE 1/16/64
CHECKED
APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

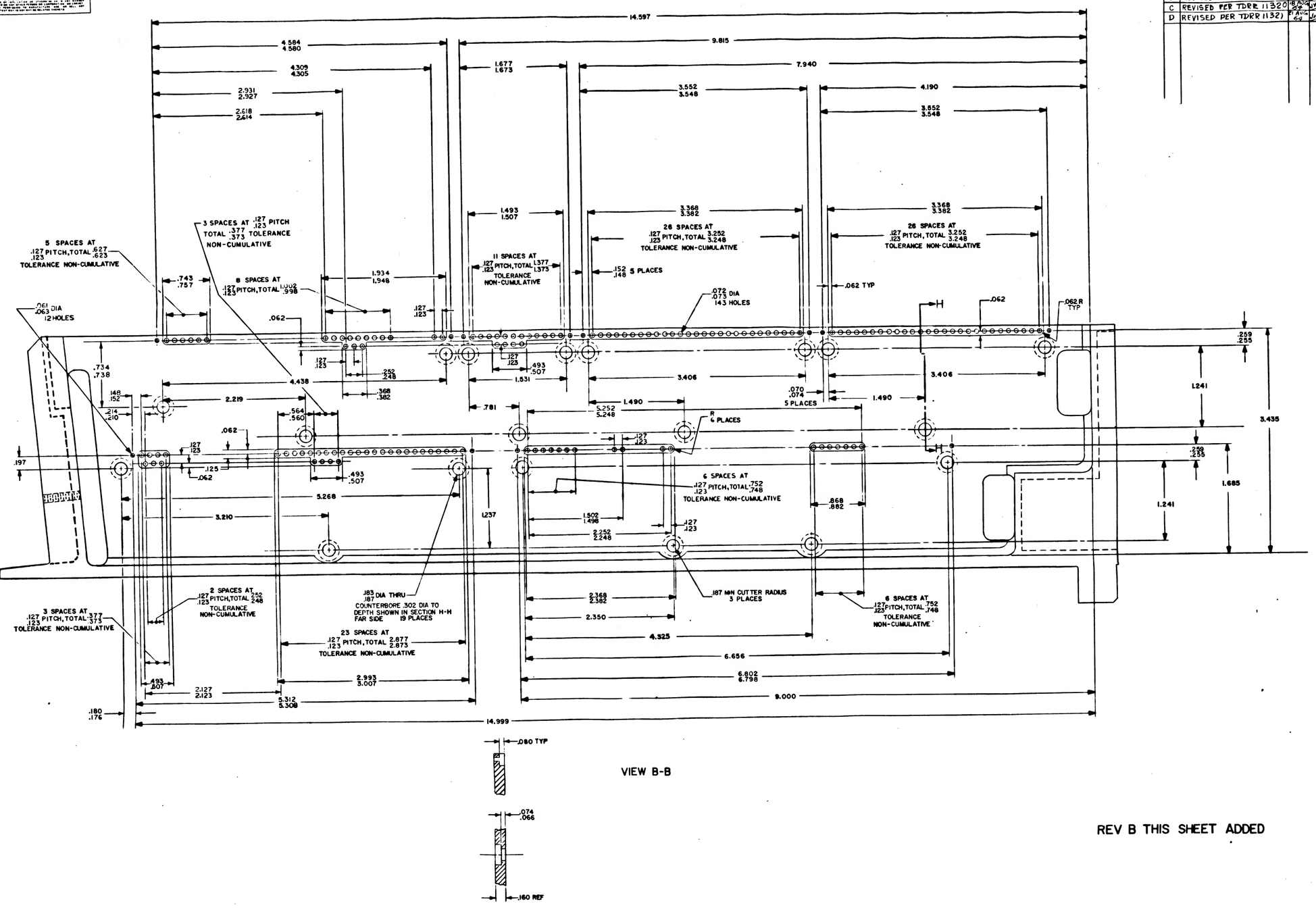
FRAME,
TRAY 7

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008177
SCALE 1/1 | WT | SHEET 1 OF 3

1008177

SYM	REVISIONS TDRR 2554 DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 06457	2/15/67	WHP
B	REVISED PER TDRR 07134	10 APR 67	WHP
C	REVISED PER TDRR 11320	15 AUG 67	WHP
D	REVISED PER TDRR 11321	21 AUG 67	WHP



VIEW B-B

PARTIAL SECTION
H-H

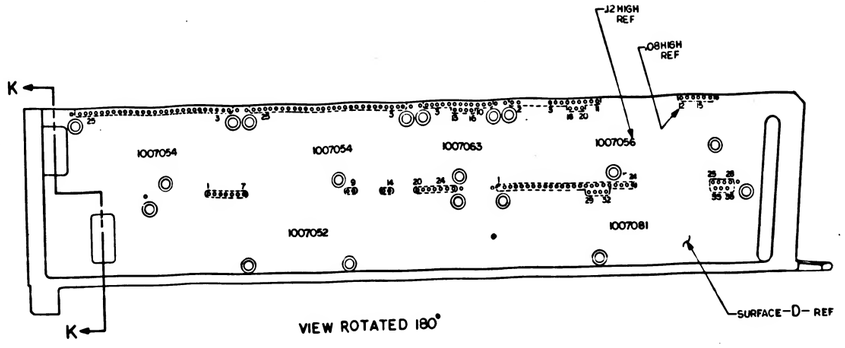
REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
	LIST OF MATERIALS		

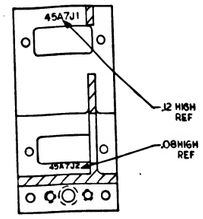
NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± ± ± DO NOT SCALE DRAWING MATERIAL HEAT TREATMENT FINAL FINISH	MIT INSTRUMENTATION LAB Cambridge Mass. DRAWN DATE CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
APPLICATION			MANNED SPACECRAFT CENTER HOUSTON TEXAS
			FRAME, TRAY 7
			CODE IDENT NO E NASA DRAWING NO 1008177
			SCALE 2/1 WT SHEET 2 OF 3

1008177 B

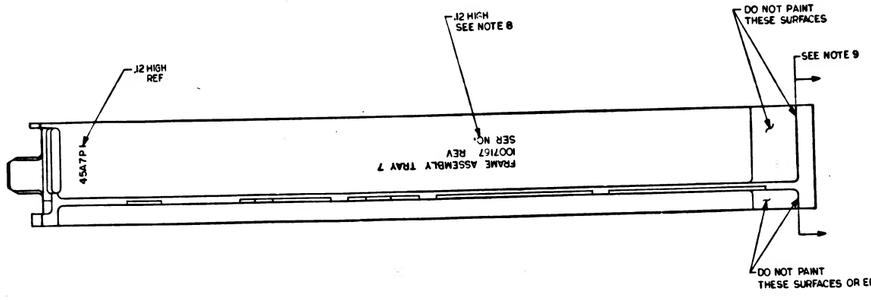
REVISIONS			
DIV	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 3647		
B	REVISED PER TDRR 07134	6 AUG 65	
C	REVISED PER TDRR 11320	6 AUG 65	
D	REVISED PER TDRR 11321	6 AUG 65	

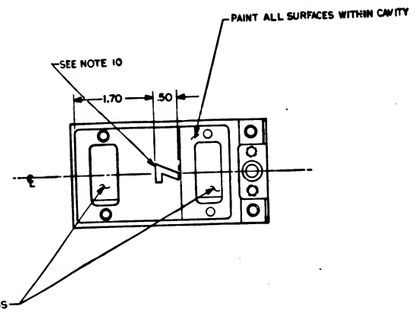


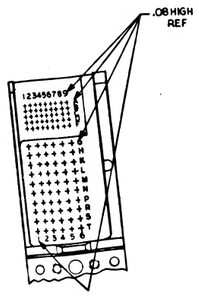
VIEW ROTATED 180°

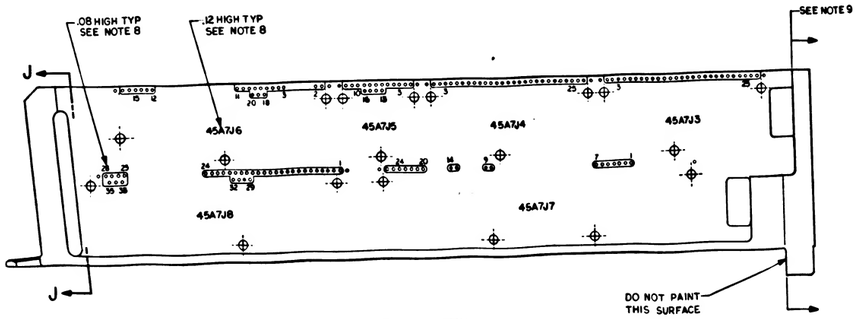


SECTION K-K

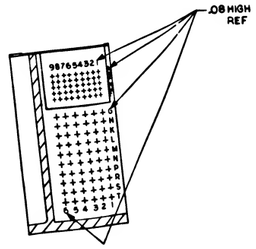








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ±	M I T INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DO NOT SCALE THIS DRAWING	CONTRACT		
MATERIAL —	DRAWN	DATE DEC 1965	FRAME, TRAY 7
HEAT TREATMENT —	CHECKED		
FINAL FINISH —	APPROVAL		
NEXT ASSY USED ON	APPROVAL		
APPLICATION	NASA APPROVAL	CODE IDENT NO E	NASA DRAWING NO 1008177
	MIT APPROVAL	SCALE 1/1 WT	SHEET 3 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 01447	10-20-64	WH
B	REVISED PER TDRR 07184	10-20-64	WH
C	REVISED PER TDRR 11327	6-4-65	WH
D	REVISED PER TDRR 11321	6-4-65	WH
E	REVISED PER TDRR 11351	6-4-65	WH

SECTION D-D

.030 MAX PERMISSIBLE

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED.

.12 R

.12 2 PLACES

.100

.697 .696

2.150 2.130

.748 .746

30° TYP

.135 .115 TYP

1.270 1.260

.385 .365

.110 .090

.000 .015 R

.570

.32

.0005 IN/IN

.160

D

D

3.450

2.344

.710 .690

.570

.100

.285

CUTOUT THRU 2 PLACES

1.070 REF

.812

.618

1.237

1.625

.100 TYP

2.250

.140 DIA THRU 2 PLACES

.140 DIA .260 .240 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

9°0'±0°15'

.040 .060 TYP

30°

.477

30°

.040 .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 .030 R TYP

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.125

.761

.125 MAX

-F-

-B-

LC.004

.0003 MAX STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.072 .073 DIA THRU 45 HOLES

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.710 .690

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

.094R

F

D

F

9 EQUAL SPACES AT .200
PITCH TOTAL 1.800±002
TOLERANCE NON-CUMULATIVE

2.452 2.448

.155 .145

1.512

.040 .060 x 45°±5°
2 PLACES
BLEND WITH .12 R

.576 .572

1.00

.314 .310

#4-40 UNC-3B
SEE NOTE 6

±.002

5 EQUAL SPACES AT .200
PITCH TOTAL 1.000±.002
TOLERANCE NON-CUMULATIVE

.137 .139 DIA 60 HOLES

.210

.447 .427

.080

.330 .310

.18 TYP

.005 R MAX PERMISSIBLE

BREAK EDGE THIS SIDE .03

CUTOUT THRU

45° TYP

.125

3.010 2.990

2.227

.000 .030 R

.16R 2 PLACES

-C-

.005

32

.094

.062

.125

.12 3 PLACES

SEE VIEW A

.487 .491 (FROM GAGE POINT)

G

G

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED.

BREAK 4 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.520 .500 2 PLACES

.385 .365

2.380 2.400

1.000 1.020 2 PLACES

.1218

.000 .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

.050

.094

.188

.570 .550

.595 .575 DIM. FOR STEP ONLY

.610 .596

.062 x 45° TYP

.030 R

C B A

E E

A

B

C

.406

.812

.562

L.135 1.125

.813 .811

L.625 1.623

1.070

2.150 2.130 REF

SECTION F-F

.430 .400

SECTION G - G
SCALE 2/1

-D- -E-

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

.186 DIA .190 CSK 100° x .230 .210

.228 .226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 .169 DIA THRU

10-32UNF-2 THRU

82° ±1° CSK. .189 .193 DIA

.005 DIA

SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA X .142 DEEP

.281

.250 .246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122, CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

1007167			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± XX ±.02 ±
DO NOT SCALE THIS DRAWING
XXX ±.005 0° 30'
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINAL FINISH
SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge Mass.
DRAWN MAC 10-20 DATE 10-20-64
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 11/19/64
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

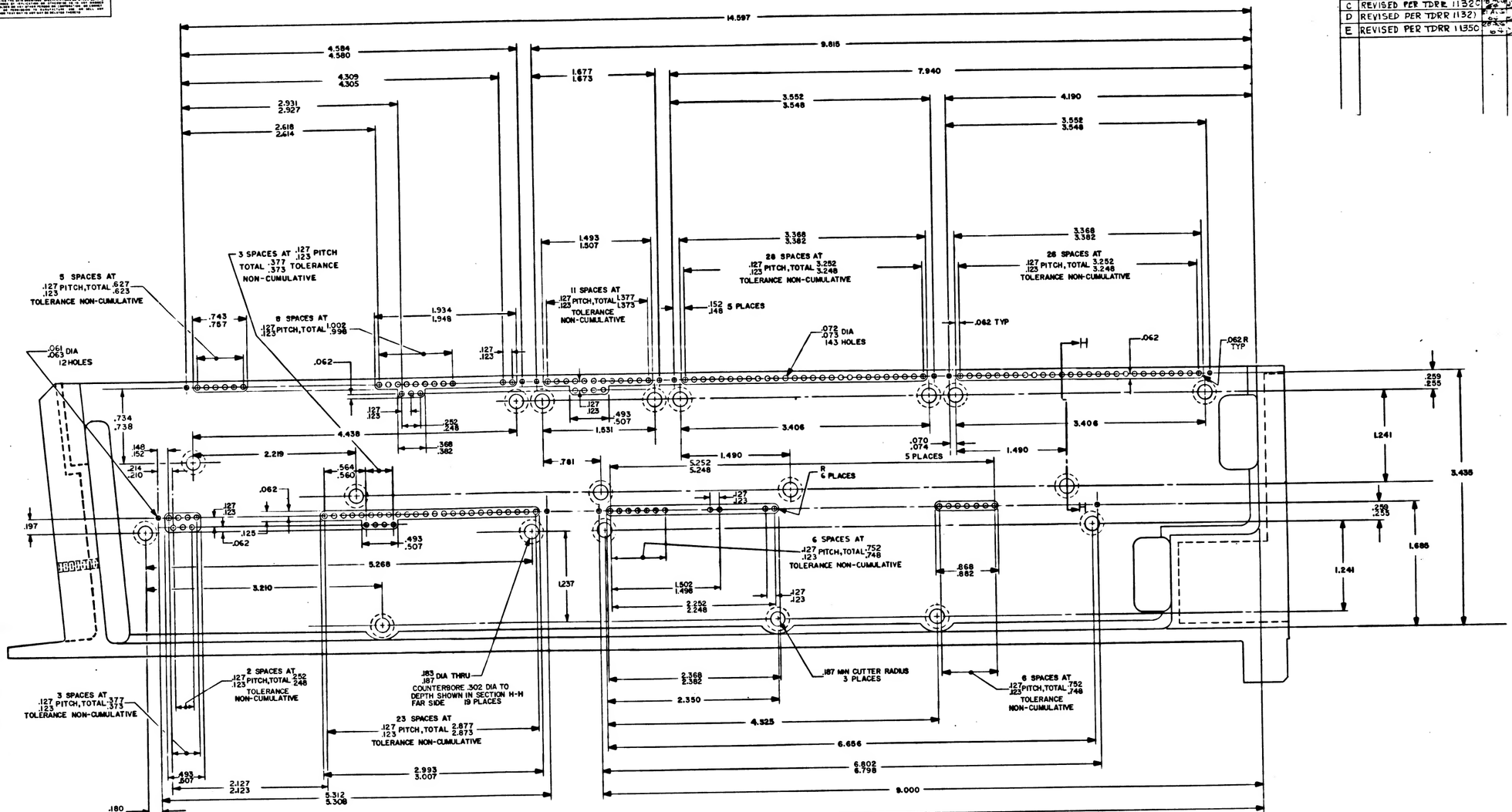
FRAME, TRAY 7

CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008177

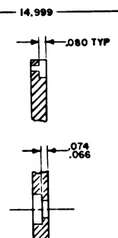
SCALE 1/1 WT SHEET 1 OF 3

1008177 F

SYM	REVISIONS TDRR 25541 DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 06687		
B	REVISED PER TDRR 07134		
C	REVISED PER TDRR 11320		
D	REVISED PER TDRR 11321		
E	REVISED PER TDRR 11350		



VIEW B-B



PARTIAL SECTION
H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge 39, Mass.
DRAWN [illegible] DATE 6-16-67
CHECKED
APPROVAL
APPROVED for R. Post 1-14-68
NASA APPROVAL 1/14/68
MIT APPROVAL

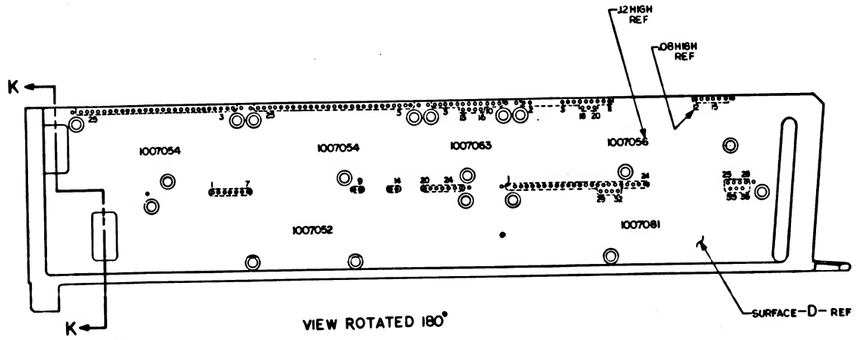
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 7

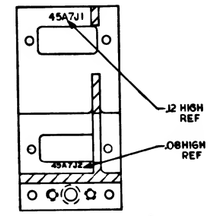
CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008177
SCALE 2/1 | WT | SHEET 2 OF 3

1008177 E

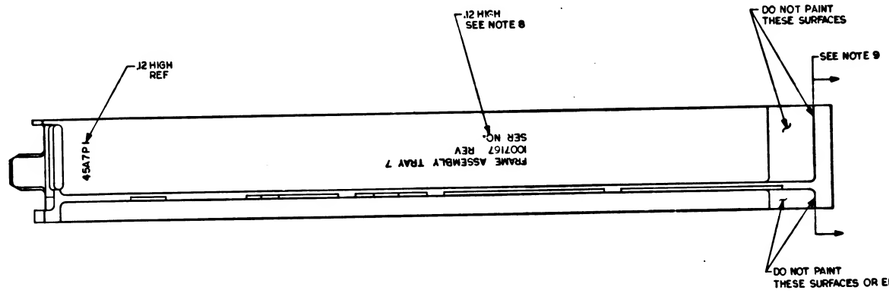
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR [illegible]		MIC
B	REVISED PER TDRR 07134	10 APR 64	JJJ
C	REVISED PER TDRR 11320	15 AUG 64	JJJ
D	REVISED PER TDRR 11321	21 AUG 64	JJJ
E	REVISED PER TDRR 11350	25 SEP 64	JJJ

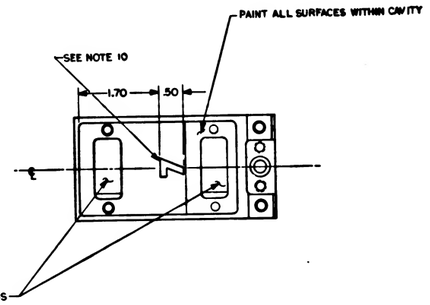


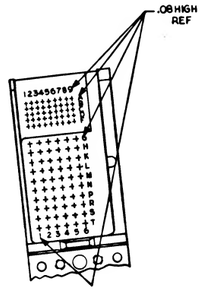
VIEW ROTATED 180°

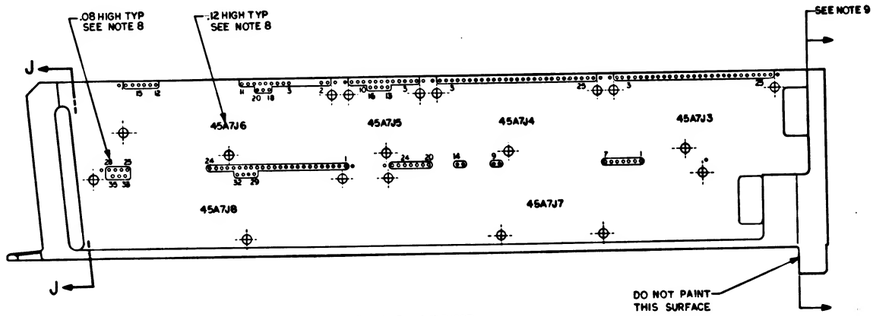


SECTION K-K

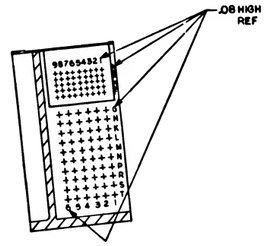








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS .XX ± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB Cambridge Mass
CONTRACT
DRAWN [illegible] DATE DEC 1963
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME, TRAY 7

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008177

SCALE 1/1 WT SHEET 3 OF 3

1008177 E

REVISIONS				
DTR		DESCRIPTION	DATE	APPROVAL
	A	REVISED PER TDRR 30617		
	B	REVISED PER TDRR 07134		
	C	REVISED PER TDRR 11320		
	D	REVISED PER TDRR 11321		
M	E	REVISED PER TDRR 11350		
	F	REVISED PER TDRR 3938		

SECTION D-D

VIEW A
SCALE 2/1

SECTION F-F

SECTION G - G
SCALE 2/1

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

SECTION E-E

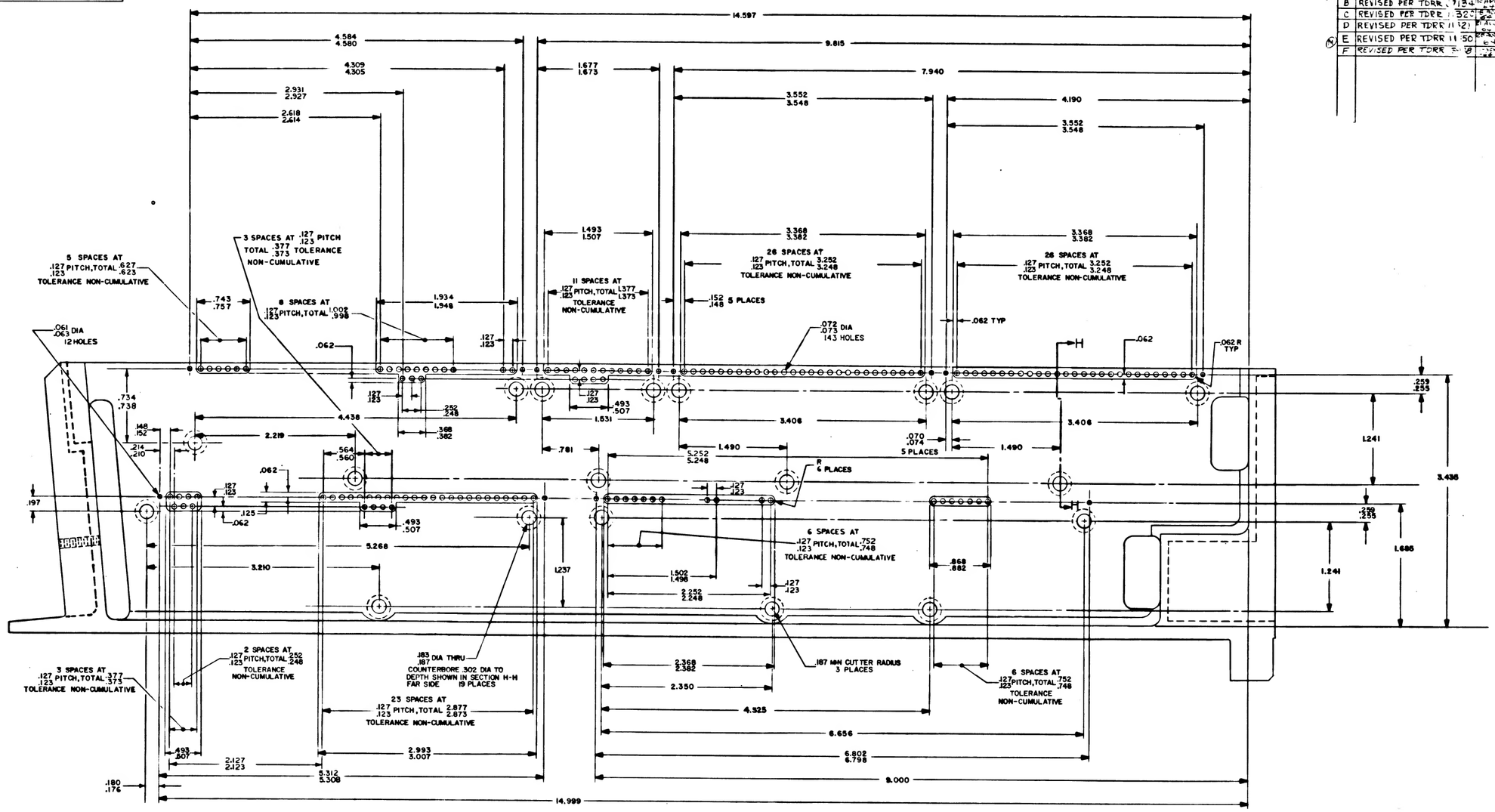
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATL: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE +.14 -.10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE
7. COAT THREADS OF FIND NO. 1 & FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE E PER ND1002122. CENTRALIZE AS SHOWN.

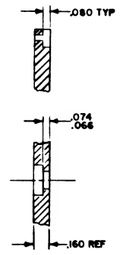
QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED. SELF-LOCKING	2
1	1008177-1	FRAME, TRAY	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge Mass.	MANNED SPACECRAFT CENTER HOUSTON TEXAS	
MATERIAL SEE NOTE 2	DRAWN [illegible] DATE [illegible]	FRAME, TRAY 7	
HEAT TREATMENT —	CHECKED		
FINAL FINISH SEE NOTE 6	APPROVAL		
1007167 NEXT ASSY USED ON APPLICATION	NASA APPROVAL	CODE IDENT NO E	NASA DRAWING NO 1008177
	MIT APPROVAL	SCALE 1/1 WT	SHEET 1 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 02		
B	REVISED PER TDRR 1734	7/24	APP
C	REVISED PER TDRR 1832	8/31	
D	REVISED PER TDRR 11121	12/1	
E	REVISED PER TDRR 11150	12/20	
F	REVISED PER TDRR [illegible]	[illegible]	





VIEW B-B

PARTIAL SECTION
H-H

REV B THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB CAMBRIDGE MASS
DWG NO CONTRACT
DRAWN [illegible] DATE 4-16-68
CHECKED
APPROVAL
APPROVAL

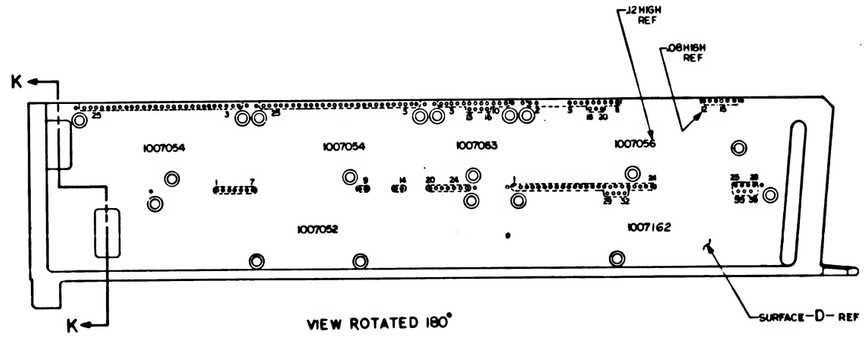
MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME, TRAY 7

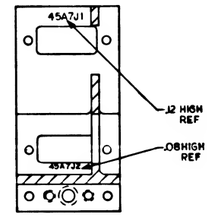
NASA APPROVAL
MIT APPROVAL

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008177
SCALE 2/1 | WT | SHEET 2 OF 3

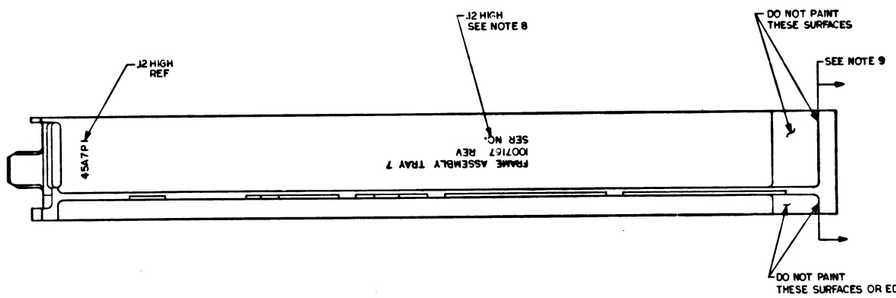
REVISIONS			
QTY	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 35047		WK
B	REVISED PER TDRR 07134	6 MAR 64	JJJ
C	REVISED PER TDRR 11320	8 AUG 64	WK
D	REVISED PER TDRR 11321	11 AUG 64	WK
(M) E	REVISED PER TDRR 11350	25 AUG 64	WK
F	REVISED PER TDRR 3938	11 NOV 64	WK

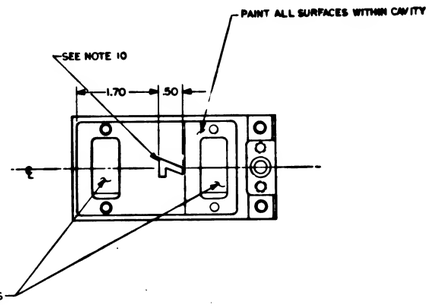


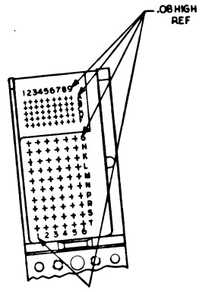
VIEW ROTATED 180°

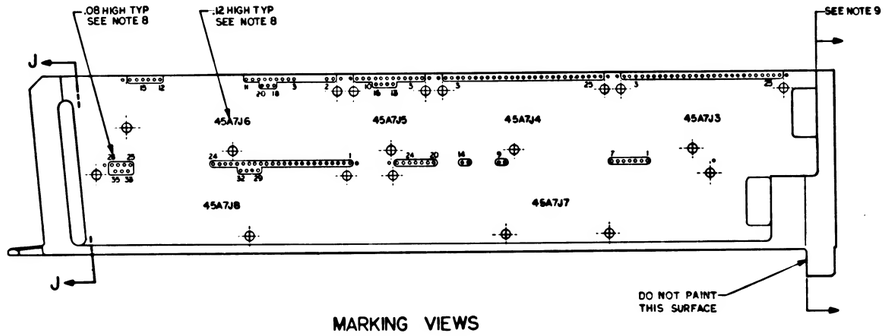


SECTION K-K

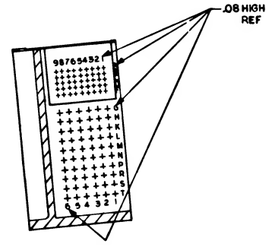








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± .XX ± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINISH — NEXT ASSY / USED ON APPLICATION	M I T INSTRUMENTATION LAB Cambridge Mass	MANNED SPACECRAFT CENTER HOUSTON TEXAS
	DRAWN DATE DEC 1963 CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL	FRAME, TRAY 7
		CODE IDENT NO. / SIZE E / NASA DRAWING NO 1008177
		SCALE 1/1 / WT / SHEET 3 OF 3

1008177 F

REVISIONS PCR 23542

SECTION D-D

.030 MAX PERMISSIBLE

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED.

.12 R

.12 2 PLACES

.12 R

.385 .365

.110 .090

.000 .018 R

.570

32

.0005 IN/IN

.160

3.450
2.344
.710 .690
.570
.285
CUTOUT THRU 2 PLACES
1.070 REF
.812
.648
1.625
1.237
.100 TYP
.140 DIA THRU 2 PLACES
2.250
.140 DIA
.260 .240 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE
GAGE POINT
.729
.220 .218
30°
5°0'±0°15'
.040 .060 TYP
30°
.477
30°
.040 .060 BLEND WITH .12 R
5°
VIEW A
SCALE 2/1

.000 .030 R TYP
.094 R MAX PERMISSIBLE
CUTTER RADIUS
.125 MAX
-F-
-B-
⊥C .004
.0003 MAX STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.072 .073 DIA THRU 46 HOLES
⊙ .004 DIA

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.181
.447 .427
.080
.330 .310
.25 TYP
.005 R MAX PERMISSIBLE
CUTOUT THRU
45° TYP
.125
3.010 2.990
2.227
.000 .030 R
.16R 2 PLACES
.710 .690
4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE
.094R
F
D
F
9 EQUAL SPACES AT .200
PITCH TOTAL 1.800±002
TOLERANCE NON-CUMULATIVE
2.460 BSC
.158 .148
L.562
.312 BSC
.040 .060 x 45°±5°
2 PLACES
BLEND WITH .12 R
1.00
#4-40 UNC-3B TAP AFTER ANODIZING
.574 BSC
±.002
5 EQUAL SPACES AT .200
PITCH TOTAL 1.000±.002
TOLERANCE NON-CUMULATIVE
.137 .139 DIA 60 HOLES
⊙ .004 DIA
.005
-C-
A
32
SEE VIEW A
.487 (FROM GAGE POINT)
.491
.062
.094
.125
.12 3 PLACES
.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED.
G
G

.430 .400

SECTION F-F

-D- -E-

SECTION G - G
SCALE 2/1

CUTOUT THRU
.030 R MAX PERMISSIBLE ONE PLACE ONLY
.520 .500 2 PLACES
.385 .365
2.220 2.240
1.000 1.020 2 PLACES
.128
.000 .018 R
4.680 REF
3.700
.050
.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION
.094
.188
.570 .550
.595 .575 DIM. FOR STEP ONLY
.610 .596
.062 x 45° TYP
.030 R

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C B A E E A B C

.406
.812
.562
1.135 1.125
.813 .811
L.625 L.623
1.070
2.150 2.130 REF

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002108. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1& FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.

.186 DIA .190
CSK 100° x .230 .210
.228 .226
5°0'±0°15'

SECTION A-A
2 PLACES

.248
2
.165 .169 DIA THRU
10-32UNF-2B THRU
82° ±1° CSK, .189 .195 DIA
⊙ .005 DIA
SEE NOTES 8
5°

SECTION B-B
2 PLACES

.272 DIA
C'BORE .406 DIA X .142 DEEP
.281
.250 .246
5°
.245
.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008177	FRAME, TRAY	1

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINISH SEE NOTE 6

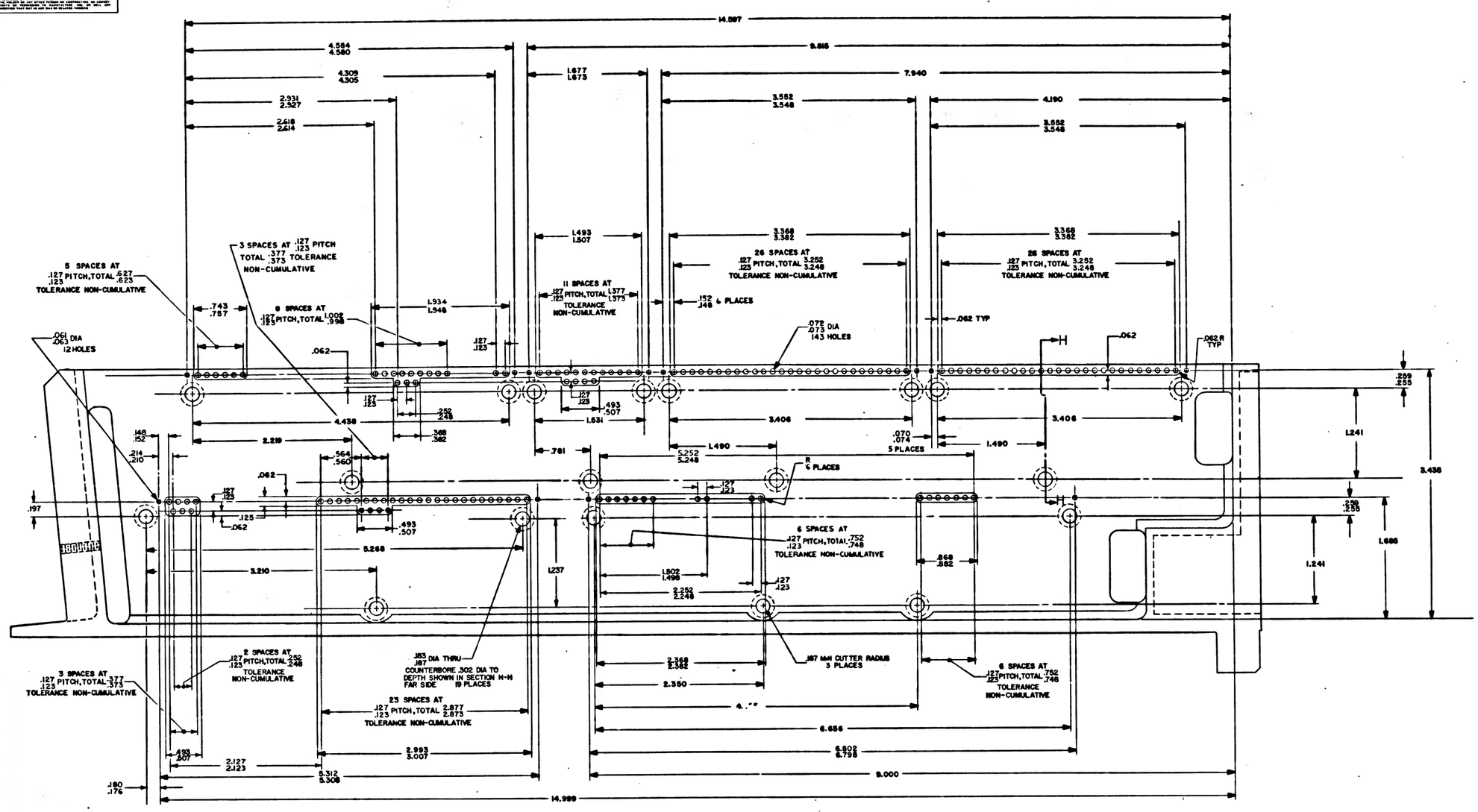
MIT INSTRUMENTATION LAB Cambridge Mass.
DRAWN MAR 64 DATE 1-16-64
CHECKED
APPROVAL
APPROVAL 1-16-64
NASA APPROVAL 1-17-64
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 7

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008177
SCALE 1/1 | WT | SHEET 1 OF 2

1008177



.080 TYP

.074 .066

.160 REF

VIEW B-B

PARTIAL SECTION H-H

REV B THIS SHEET ADDED

MASTER

1008177

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES DO NOT SCALE DRAWING MATERIAL HEAT TREATMENT FINAL FINISH NEXT ASSY USED ON APPLICATION

M I T INSTRUMENTATION LAB Cambridge Mass. DRAWN DATE CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 7

CODE IDENT NO. E | SIZE | NASA DRAWING NO. 1008177 | SCALE 3/1 | WT | SHEET 2 OF 2

REVISIONS TDRR 05645			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 06645		

SECTION D-D

.006 MAX ALLOWABLE STEP ABOVE SURFACE -D- STEP BELOW SURFACE NOT PERMITTED

.12 R

.12 2 PLACES

.100

.697 / .656

2.150 / 2.130

.748 / .746

30° TYP

.12 R

.135 / .115 TYP

.270 / .260

D

D

.385 / .365

.110 / .090

.570

32

.0005 IN/IN

.160

.000 / .018 R

3.450

.710 / .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA
.520 DIA SPOTFACE
.240
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5°0'±0°15'

.040 / .060 TYP

30°

30°

.477

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

CUTTER RADIUS

.000 / .030 R TYP

.094 R MAX PERMISSIBLE

.781

.125

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

-B-
⊥C .004

.072 / .073 DIA THRU 48 PLACES

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE
NON-CUMULATIVE

.710 / .690

4 EQUAL SPACES AT .125
±.002 PITCH TOTAL .500
±.002 TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT .200±.002
PITCH TOTAL 1.800±.002
TOLERANCE
NON-CUMULATIVE

2.452 / 2.448

.878

1.312

.040 / .060 x 45°±5°
2 PLACES
BLEND WITH
.12 R

.314 / .310

4-40 UNC-3B
SEE NOTE 6

.155 / .145

.576 / .572

.137 / .139 DIA 60 HOLES

5 EQUAL SPACES AT
.200±.002 PITCH TOTAL
1.000±.002 TOLERANCE
NON-CUMULATIVE

.430 / .400

SECTION F-F

.210

.080

.447 / .427

.330 / .310

.008 R MAX. PERMISSIBLE

BREAK EDGE THIS SIDE .03

CUTOUT THRU

45° TYP

.125

3.010 / 2.990

2.227

.000 / .018 R

32

-C-

.005

.062

.094

.12
3 PLACES

.125

.487 / .491 (FROM GAGE POINT)

SEE VIEW A

.008 MAX. ALLOWABLE STEP ABOVE SURFACE -E- STEP BELOW SURFACE NOT PERMITTED.

BREAK 2 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.520 / .500

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP
2 PLACES FOR
MACHINING LOCATION*

.050

.094

.188

.570 / .550

.595 / .575 DIM.
FOR STEP ONLY

.610 / .596

.062 x 45° TYP

.030 R

G

G

-D- -E-

PARTIAL SECTION G-G
SCALE 2/1

C

B

A

E

E

A

B

C

.406

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA EL ECTRO-CHEMICAL ETCH
12 HIGH CHARACTERS PER ND1002019
LOCATE CENTRALLY

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002018. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO.1 AND NO2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER & MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D. CENTRALIZE AS SHOWN.
8. PAINT PER ND_____ USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME, UNLESS OTHERWISE SPECIFIED. ALL HOLES TO FREE OF PAINT
9. PAINT PER ND_____ USING ND0729-1 CHARACTER TO BE TYPE I PER ND 1002122, CENTRALIZE AS SHOWN.

.186 DIA
.190
CSK 100° x .230
.210

.228
.226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 / .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK. .189 / .199 DIA

.005 DIA

SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP

.281

.250 / .246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008178-1	FRAME, TRAY	1

LIST OF MATERIALS

1007168	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 XXX ±.005 ANGLES ° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINISH
SEE NOTE 6

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS
CONTRACT

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN D. Mueller DATE 12/1/67
CHECKED
APPROVAL
APPROVAL

FRAME,
TRAY 8

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008178

SCALE 1/1 | WT | SHEET 1 OF 3

1008178 A

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		

13.686
10.685
8.266
6.125
3.156

4 EQUAL SPACES AT .127 = .502 .125 = .496
TOLERANCES NON-CUMULATIVE
6 PLACES

3 EQUAL SPACES AT .127 = .377 .125 = .373
TOLERANCES NON-CUMULATIVE
6 PLACES

16 EQUAL SPACES AT .127 = 2.002 .123 = 1.998
TOLERANCES NON-CUMULATIVE

13 EQUAL SPACES AT .127 = 1.627 .123 = 1.623
TOLERANCES NON-CUMULATIVE

21 EQUAL SPACES AT .127 = 2.627 .123 = 2.623
TOLERANCES NON-CUMULATIVE

6 EQUAL SPACES AT .127 = .752 .123 = .748
TOLERANCES NON-CUMULATIVE

5 EQUAL SPACES AT .127 = .627 .123 = .623
TOLERANCES NON-CUMULATIVE

10 EQUAL SPACES AT .127 = 1.252 .123 = 1.248
TOLERANCES NON-CUMULATIVE

18 EQUAL SPACES AT .127 = 2.252 .123 = 2.248
TOLERANCES NON-CUMULATIVE

.125 R 8 PLACES

.062 R 20 PLACES

.125 R 2 PLACES

.061 .063 DIA THRU 22 PLACES

.072 .073 DIA THRU 226 PLACES

.185 .187 DIA THRU .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 24 PLACES

11 EQUAL SPACES AT .127 = 1.377 .123 = 1.373
TOLERANCES NON-CUMULATIVE

15 EQUAL SPACES AT .127 = 1.627 .123 = 1.623
TOLERANCES NON-CUMULATIVE

.187 MIN CUTTER RADIUS 2 PLACES

VIEW B-B
SCALE: 2:1

.080 15 PLACES

.074 .066

SECTION H-H

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS .XX ±.03 .XXX ±.005 ANGLES ±0°30'
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

1007148 NEXT ASSY | USED ON APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN J.J. Mueller DATE 9/6/66
CHECKED
APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 8

NASA APPROVAL
MIT APPROVAL

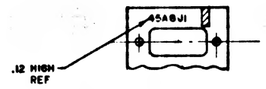
CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008178

SCALE 2:1 | WT | SHEET 2 OF 3

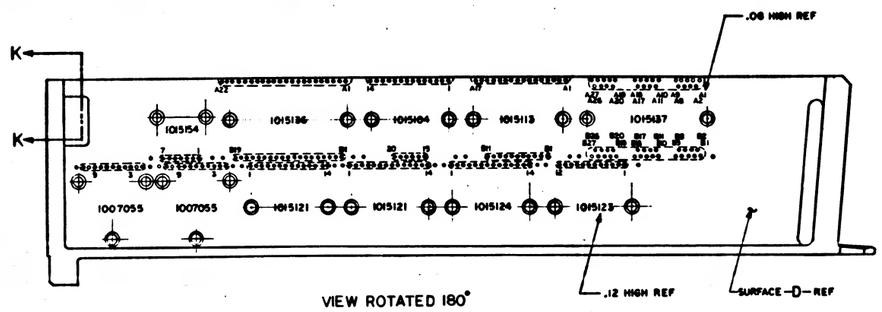
1008178 A

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

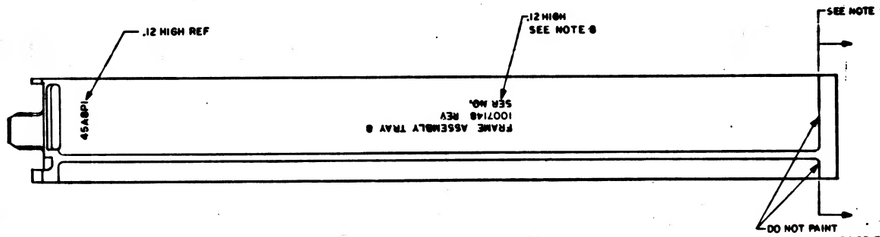
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 0488	3/15/68	WK

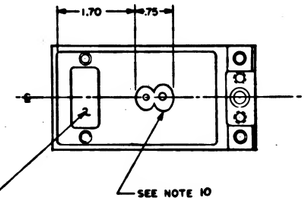


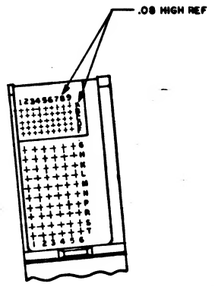
PARTIAL SECTION K-K

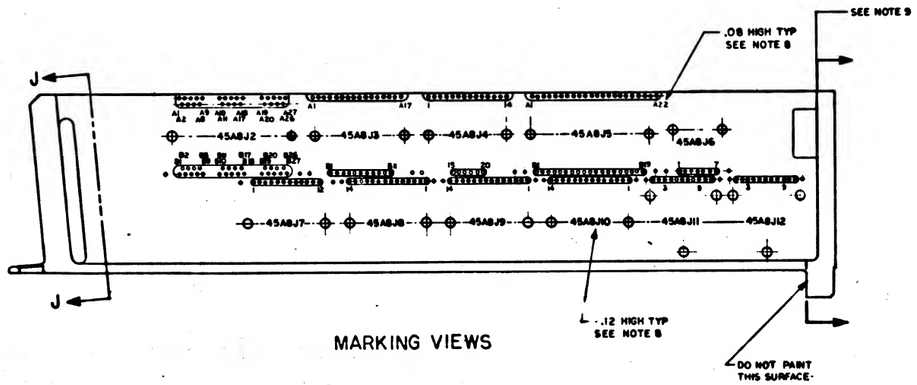


VIEW ROTATED 180°

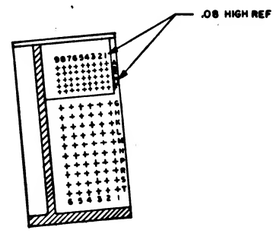








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

NEXT ASSY	USED ON	APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX=.02 ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINISH —

M I T
INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

Drawn G. Cohen DATE 6/8/67
Checked [illegible]
Approval [illegible]
Approval —
NASA Approval [illegible]
MIT Approval [illegible]

FRAME, TRAY 8

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008178
SCALE 1/1 | WT | SHEET 3 OF 3

1008178 A

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

SYM	REVISIONS TDRR 05545 DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 0646 F7	4-4-68	
B	REVISED PER TDRR 1132C	18 AUG 69	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D- STEP BELOW SURFACE NOT PERMITTED

.12 2 PLACES

.12 R

.100

.697 / .696

30° TYP

2.150 / 2.130

.748 / .746

.135 / .115 TYP

.270 / .260

.385 / .365

.110 / .090

.570

.32

.0005 IN/IN

.160

3.450

.710 / .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA / .260 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

CAGE POINT

.729

.220 / .218

30°

5°0' ±0°15'

.040 / .060 TYP

30°

.477

30°

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 / .030 R TYP

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.781

.125

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

-B-

⊥C .004

.072 / .073 DIA THRU 46 PLACES

8 EQUAL SPACES AT .125 ±0°0' PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.710 / .690

4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT 200 ±002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE

2.402 / 2.342

.875

1.312

.314 / .310

.040 / .060 x 45° ±5° 2 PLACES BLEND WITH .12 R

4-40 UNC-3B SEE NOTE 6

.155 / .145

.572

.137 / .139 DIA 60 HOLES

5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.430 / .400

SECTION F-F

.210

.080

.447 / .427

.330 / .310

BREAK EDGE THIS SIDE .03

.005 R MAX. PERMISSIBLE

CUTOUT THRU

.1 TYP

45° TYP

.125

3.010 / 2.990

2.227

.000 / .015 R

.16 R 2 PLACES

-C-

32

.005

SEE VIEW A

.487 (FROM GAGE POINT)

.491

.062

.094

.12 3 PLACES

.125

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E- STEP BELOW SURFACE NOT PERMITTED.

-D- -E-

PARTIAL SECTION G-G
SCALE 2/1

BREAK 2 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.220 / .200

.385 / .365

1.000 / 1.020

.000 / .015 R

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

.050

G

.094

G

.610 / .596

.030 R

.062 X 45° TYP

4.260

3.700 REF

.188

.570 / .550

.595 / .575 DIM. FOR STEP ONLY

C B A E

E A B C

.406

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 / 2.130 REF

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH 12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.75 / 16.65 (FROM GAGE POINT)

17.488 / 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002188. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF IND NO.1 AND NO2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D, AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D, CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME, UNLESS OTHERWISE SPECIFIED. ALL HOLES TO FREE OF PAINT
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3 CHARACTER TO BE TYPE I PER ND 1002122, CENTRALIZE AS SHOWN.

.186 DIA / .190 CSK 100° X .230 / .210

.228 / .226

5°0'±0°15'

SECTION A-A
2 PLACES

.248

2

.165 / .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 / .199 DIA

.005 DIA

SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA CBORE .406 DIA X .142 DEEP

.281

.250 / .246

5°

.245

.015 R MAX PERMISSIBLE

5°

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008178-1	FRAME, TRAY	1

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES .XX ±.02 .XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	
		MATERIAL SEE NOTE 2	
1007168		HEAT TREATMENT —	
NEXT ASSY	USED ON	FINAL FINISH SEE NOTE 6	
APPLICATION			

INSTRUMENTATION LAB Cambridge Mass

DRAWN J.G. Martin DATE 6/27/68

CHECKED

APPROVAL

APPROVAL W.H. Scott 6/27/68

NASA APPROVAL W.H. Scott 7/27/68

MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 8

CODE IDENT NO E

SIZE

NASA DRAWING NO 1008178

SCALE 1/1 WT

SHEET 1 OF 3

1008178 B

SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 2548	18 AUG 64	
B	REVISED PER TDRR 11320		

13.656
10.625
8.266
6.125
3.156

2.814 / 2.810
2.534 / 2.530
2.033 / 2.029
1.158 / 1.154
.142 / .138
4 EQUAL SPACES AT .127 = .502 .123 .498 TOLERANCES NON-CUMULATIVE 8 PLACES
.283 / .279
3 EQUAL SPACES AT .127 = .377 .123 .373 TOLERANCES NON-CUMULATIVE 6 PLACES
.062

2.158 / 2.154
16 EQUAL SPACES AT .127 = 2.002 .123 1.998 TOLERANCES NON-CUMULATIVE
.080 / .076
1.877 / 1.873
.143 / .139
.125

1.940 / 1.936
13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE
.158 / .154
.125

2.752 / 2.748
21 EQUAL SPACES AT .127 = 2.627 .123 2.623 TOLERANCES NON-CUMULATIVE
.064 / .060
2.471 / 2.467
.143 / .139
.125

1.314 / 1.310
.283 / .279
6 EQUAL SPACES AT .127 = .752 .123 .748 TOLERANCES NON-CUMULATIVE
.143 / .139
1.033 / 1.029
.125
.062

H — H

.062
.125 R 8 PLACES
.346 / .342
.455 / .451
5 EQUAL SPACES AT .127 = .627 .123 .623 TOLERANCES NON-CUMULATIVE

1.592 / 1.588
1.467 / 1.463
.127 / .123
.797 / .793
.125 R 2 PLACES
1.221 / 1.217
2.096 / 2.092
.125
.125
10 EQUAL SPACES AT .127 = 1.252 .123 1.248 TOLERANCES NON-CUMULATIVE
.658 / .654
.252 / .248
18 EQUAL SPACES AT .127 = 2.252 .123 2.248 TOLERANCES NON-CUMULATIVE
.867 / .863
.259 / .255
1.241
.062
.867 / .863
.062 R 20 PLACES
1.847
1.686

.061 / .063 DIA THRU 22 PLACES
.072 / .075 DIA THRU 226 PLACES
.183 / .187 DIA THRU .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 24 PLACES

.187 MIN CUTTER RADIUS 2 PLACES

.158 / .154
.283 / .279
1.627 / 1.623
11 EQUAL SPACES AT .127 = 1.377 .123 1.373 TOLERANCES NON-CUMULATIVE
1.940 / 1.936

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 .123 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936

.074 / .070
.704 / .700
1.408 / 1.404
.152 / .148
10 EQUAL SPACES AT .127 = 1.252 .123 1.248 TOLERANCES NON-CUMULATIVE
1.552 / 1.548

.074 / .070
.704 / .700
1.408 / 1.404
.152 / .148
10 EQUAL SPACES AT .127 = 1.252 .123 1.248 TOLERANCES NON-CUMULATIVE
1.552 / 1.548

1.823
3.572
5.703
7.828
9.953
12.078

VIEW B-B
SCALE: 2:1

.080 15 PLACES
.074 / .066

SECTION H-H

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

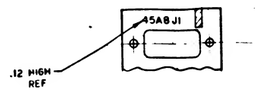
MIT INSTRUMENTATION LAB Cambridge Mass.	MANNED SPACECRAFT CENTER HOUSTON TEXAS
CONTRACT	
DRAWN J. J. Mastrick DATE 9/9/64	FRAME, TRAY 8
CHECKED	
APPROVAL	
APPROVAL	
NASA APPROVAL	CODE IDENT NO. / SIZE E / NASA DRAWING NO. 1008178
MIT APPROVAL	SCALE 2:1 / WT / SHEET 2 OF 3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ±.03 .XXX ±.005 ANGLES ±30'
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

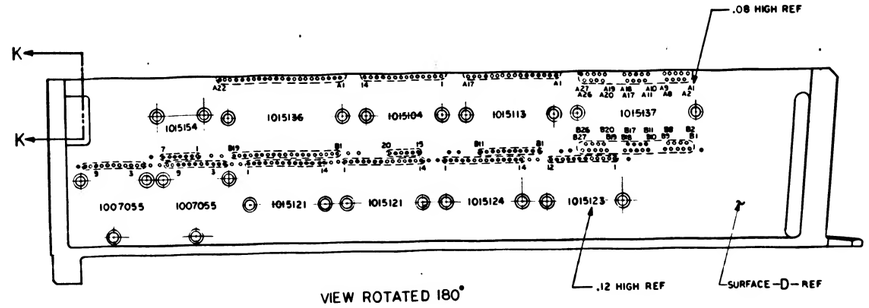
NEXT ASSY	USED ON
1007148	
APPLICATION	

1008179 B

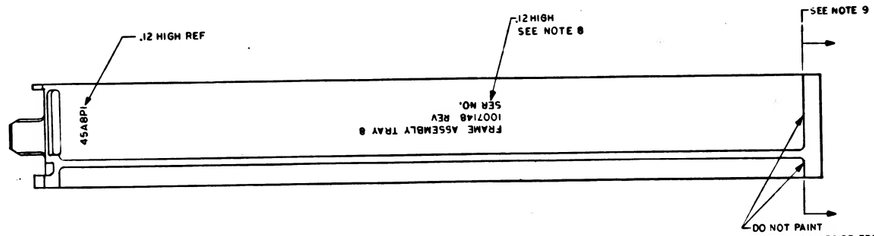
REVISIONS			
DTR	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 0644F9	7/11/69	WK
B	REVISED PER TDRR 11320	8/26/69	UWE

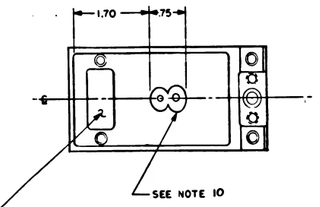


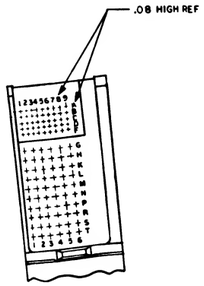
PARTIAL SECTION K-K

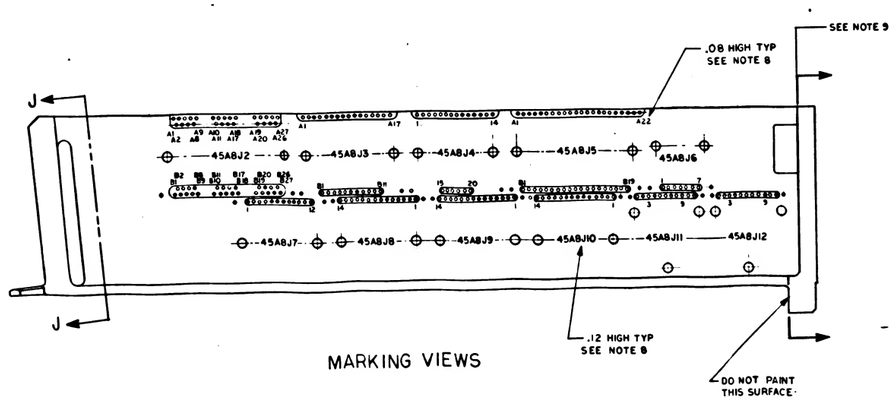


VIEW ROTATED 180°

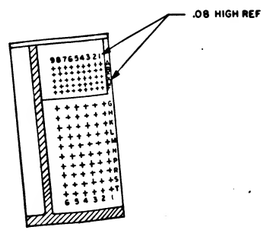








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 ANGLES ±	M I T INSTRUMENTATION LAB Cambridge Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DO NOT SCALE THIS DRAWING	DRAWN C. Lyon DATE 6/26/68	FRAME, TRAY 8	
MATERIAL —	CHECKED [illegible] DATE 6/26/68		
HEAT TREATMENT —	APPROVAL [illegible] DATE 6/26/68		
FINAL FINISH —	APPROVAL		
NEXT ASSY USED ON APPLICATION	NASA APPROVAL [illegible] DATE 8/7/69	CODE IDENT NO	SIZE E — NASA DRAWING NO 1008178
	MIT APPROVAL [illegible] DATE 6/26/68	SCALE 1/1 WT	SHEET 3 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 06044		
B	REVISED PER TDRR 11320		
C	REVISED PER TDRR 11321		

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D- STEP BELOW SURFACE NOT PERMITTED

.12 2 PLACES

.12 R

.12 R

.100

.697 .696

2.150 2.130

.748 .746

30° TYP

.135 .115 TYP

.270 .260

.110 .090

.385 .365

.570

.32

.0005 IN/IN

.160

D

D

.000 .018 R

3.450

.710 .690

.570

.100

.285

1.070 REF

.812

.618

1.625

1.237

.100 TYP

CUTOUT THRU

.140 DIA .250 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

5° 0' ±0°15'

.040 .060 TYP

30°

30°

.477

.040 .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.000 .030 R TYP

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.761

.125

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

-B-
⊥C .004

.072 .073 DIA THRU 45 PLACES

8 EQUAL SPACES AT .125 ±0° PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.710 .690

4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.800±.002 TOLERANCE NON-CUMULATIVE

2.452 2.414

.875

L312

.314 .312

.040 .060 x 45°±5° 2 PLACES BLEND WITH .12 R

4-40 UNC-3B SEE NOTE 6

.155 .145

.576 .572

.137 .139 DIA 60 HOLES

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000±.002 TOLERANCE NON-CUMULATIVE

.430 .400

SECTION F-F

.210

.080

.447 .427

.330 .310

.005 R MAX. PERMISSIBLE

BREAK EDGE THIS SIDE .03

CUTOUT THRU

45° TYP

.125

3.010 2.990

2227

.000 .015 R

32

-C-

.005

.16 R 2 PLACES

.094

.12 3 PLACES

.062

.125

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-, STEP BELOW SURFACE NOT PERMITTED.

-D- -E-

PARTIAL SECTION G-G
SCALE 2/1

BREAK 2 EDGES THIS SIDE .03

CUTOUT THRU

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.520 .500

.395 .365

1.000 1.020

.000 .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION*

.050

G

G

.094

.188

.570 .550

.595 .575 DIM. FOR STEP ONLY

.610 .596

.062 x 45° TYP

.030 R

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH 12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

C B A E A B C E

.406

.812

.562

1.135 1.125

1.813 .811

1.625 1.623

1.070

2.150 2.150 REF

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.01"
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002188. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF IND NO.1 AND NO2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D, CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND 1002110 TYPE II, USING 1010729-3 CHARACTER TO BE TYPE I PER ND 1002122, CENTRALIZE AS SHOWN.

.186 .190 DIA CSK 100° x .230 .210

.228 .226

5° 0' ±0°15'

SECTION A-A
2 PLACES

.248

2

.165 .169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189 .195 DIA

.005 DIA

SEE NOTES 6 & 7

5°

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA x .142 DEEP

.281

.250 .246

5°

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008178-1	FRAME, TRAY	1

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX±.005 0° 30' DO NOT SCALE THIS DRAWING	M I T INSTRUMENTATION LAB CAMBRIDGE MASS. DRAWN J.G. Martin DATE 4/27/68 CHECKED APPROVAL APPROVAL E.R. Trask 4/27/68 NASA APPROVAL 1/2/71 MIT APPROVAL
		MATERIAL SEE NOTE 2	
		HEAT TREATMENT —	
1007168		FINAL FINISH SEE NOTE 6	
NEXT ASSY	USED ON		
APPLICATION			

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

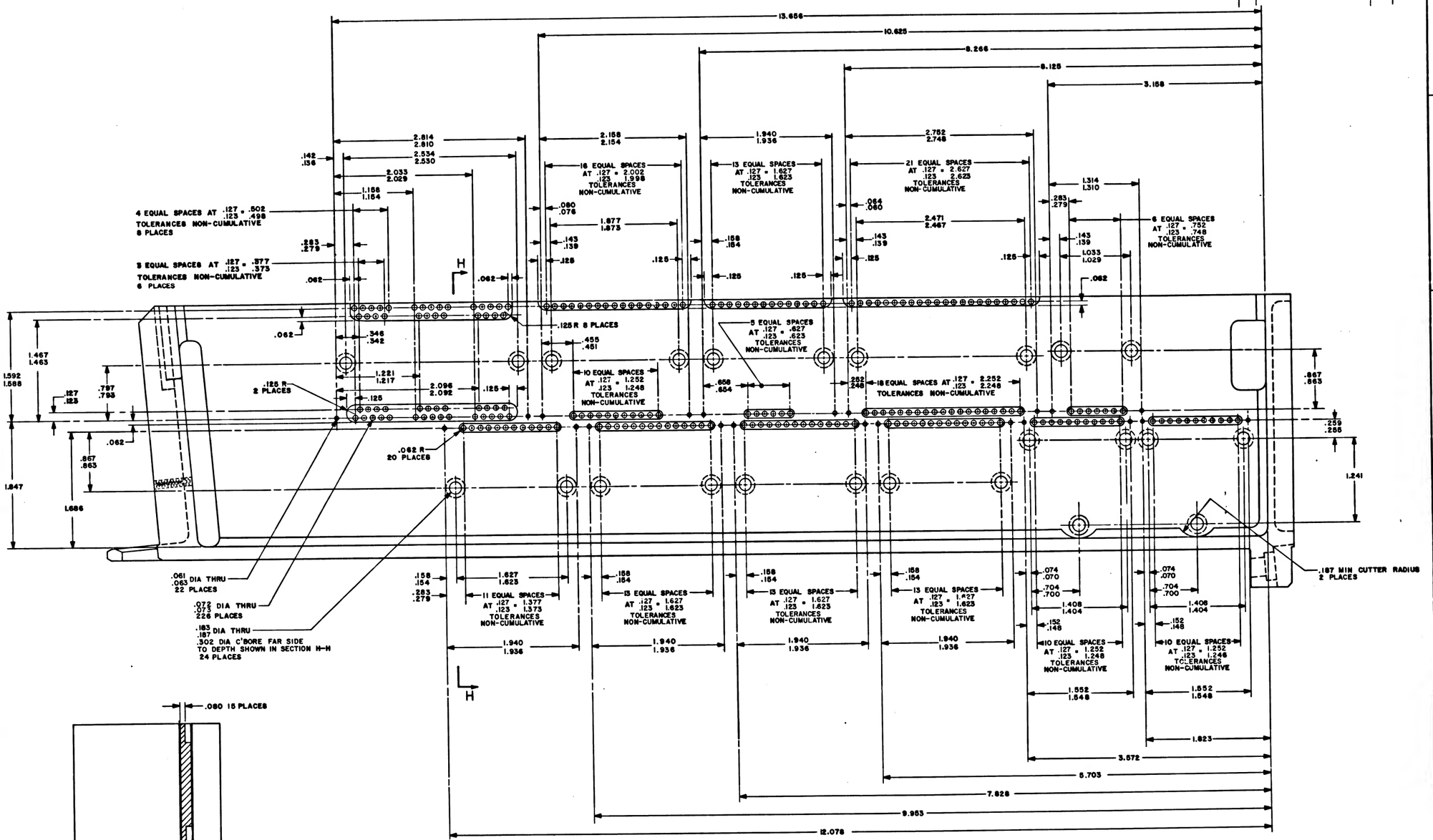
FRAME, TRAY 8

CODE IDENT NO	SIZE	NASA DRAWING NO.
	E	1008178

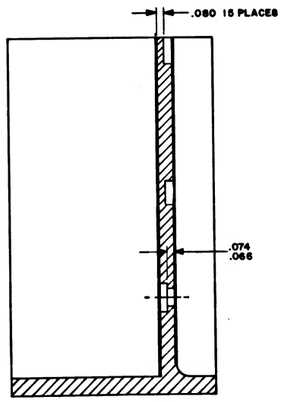
SCALE 1/1 WT SHEET 1 OF 3

1008178

SYM	REVISIONS TDRR 6554 DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 7574	10-24-67	
B	REVISED PER TDRR 11320	12-6-67	
C	REVISED PER TDRR 11321	2-13-68	



VIEW B-B
SCALE: 2:1



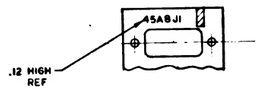
SECTION H-H

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

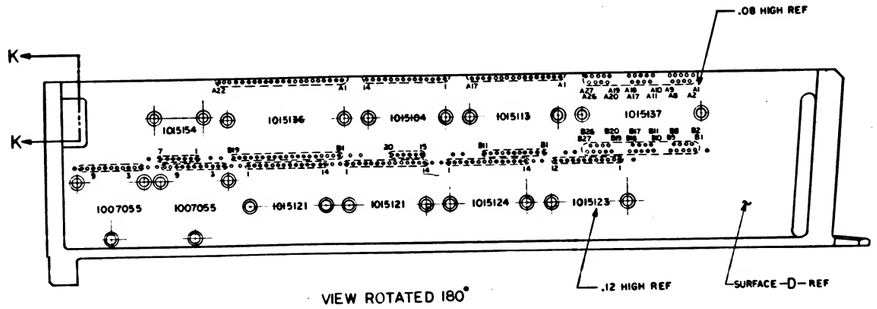
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 .XX ±.02 .XXX ±.005 ±30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge Mass	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
MATERIAL —	DRAWN J.J. Mantel DATE 10/24/67	FRAME, TRAY 8
HEAT TREATMENT —	CHECKED	
FINAL FINISH —	APPROVAL	
1007148 NEXT ASSY / USED ON	NASA APPROVAL	CODE IDENT NO. / SIZE E / NASA DRAWING NO. 1008178
APPLICATION	MIT APPROVAL	SCALE 2:1 / WT / SHEET 2 OF 3

1008178 C

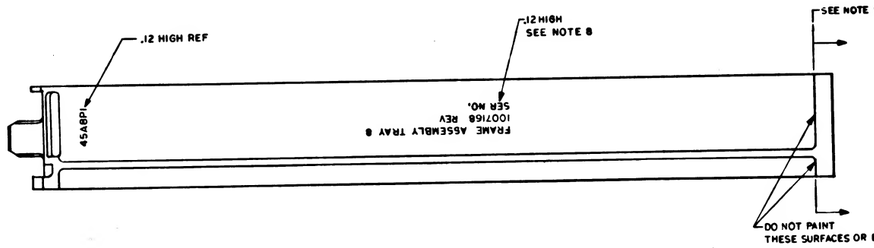
DTR	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 0016F9	3/4/68	WK
B	REVISED PER TDRR 11320	8/14/68	JWP
C	REVISED PER TDRR 11321	12/30/68	JWP

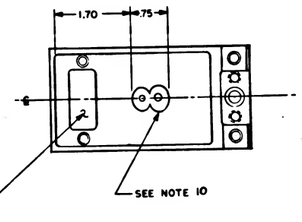


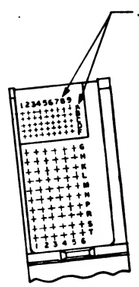
PARTIAL SECTION K-K

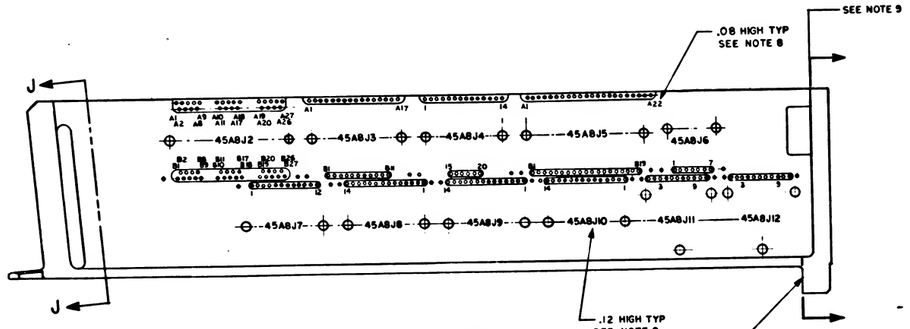


VIEW ROTATED 180°

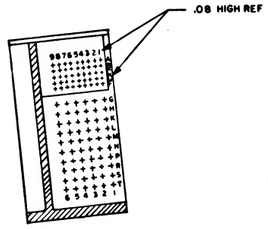








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX±.02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINISH —	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS. DRAWN G. P. Lyon DATE 6/20/68 CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
NEXT ASSY	USED ON		
APPLICATION			

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 8

CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008178 | SCALE 1/1 | WT | SHEET 3 OF 3

1008178 J/C

REVISIONS PER ASSY

ZONE	DESCRIPTION	DATE	APPROVED

SECTION D-D

.008 MAX ALLOWABLE STEP ABOVE SURFACE -D- STEP BELOW SURFACE NOT PERMITTED

.12 R

.12 2 PLACES

.100

.697 .696

30° TYP

2.150 2.130

.748 .746

.12 R

.135 .115 TYP

.270 .260

D

D

.385 .365

.110 .090

.090 .015 R

.570

32

.0005 IN/IN

.160

3.450

.710 .690

.570

.100

.285

CUTOUT THRU

1.070 REF

.812

.618

1.625

1.237

.100 TYP

.140 DIA .260 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 .218

30°

5° 0' ± 0° 15'

.040 .060 TYP

30°

.477

30°

VIEW A
SCALE 2/1

.040 .060 BLEND WITH .12 R

5°

CUTTER RADIUS

.000 .030 R TYP

.094 R MAX PERMISSIBLE

.761

.125

.125 MAX

.0003 MAX STEP BELOW ADJACENT SURFACE. PERMISSIBLE FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

-F-

-B-

⊥C .004

.072 .075 DIA THRU 48 PLACES

⌖ .004 DIA

.210

.080

.447 .427

.330 .310

.008 R MAX. PERMISSIBLE

8 EQUAL SPACES AT .125 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

.710 .690

CUTOUT THRU

45° TYP

.125

4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE

3.010 2.990

9 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.800±.002 TOLERANCE NON-CUMULATIVE

2.227

.000 .018 R

-C-

32

.005

.16 R 2 PLACES

2.450 BSC

.878

L.312

.312 BSC

.040 .060 x 45° ±5° 2 PLACES BLEND WITH .12 R

4-40 UNC-3B TAP AFTER ANODIZING

.155 .145

.574 BSC

.137 .139 DIA 80 HOLES

⌖ .004 DIA

5 EQUAL SPACES AT .200±.002 PITCH TOTAL 1.000±.002 TOLERANCE NON-CUMULATIVE

.430 .400

SEE VIEW A

.487 .491 (FROM GAGE POINT)

.062

.094

.12 3 PLACES

.125

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E- STEP BELOW SURFACE NOT PERMITTED.

.050

G

G

.094

.610 .596

.062 X 45° TYP

.030 R

.030 R MAX PERMISSIBLE ONE PLACE ONLY

CUTOUT THRU

.520 .500

.385 .365

1.000 1.020

.000 .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATION

.188

.570 .550

.595 .575 DIM. FOR STEP ONLY

C B A E E A B C

.406

.812

.562

L.135 1.125

.813 .811

1.625 1.623

1.070

2.150 2.130 REF

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA ELECTRO-CHEMICAL ETCH 12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

-D- -E-

PARTIAL SECTION G-G
SCALE 2/1

.729 REF

16.7195 16.7165 (FROM GAGE POINT)

17.488 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND1002188. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1 & FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.

.186 DIA .190 CSK 100° X .230 .210

.228 .226

5° 0' ± 0° 15'

SECTION A-A
2 PLACES

.248

2

.165 .163 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .188 .199 DIA

⌖ .005 DIA

SEE NOTES 6 & 8

5°

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA X .142 DEEP

.281

.250 .248

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008178-1	FRAME, TRAY	1

LIST OF MATERIALS

1007148	
NEXT ASSY	USED ON
APPLICATION	

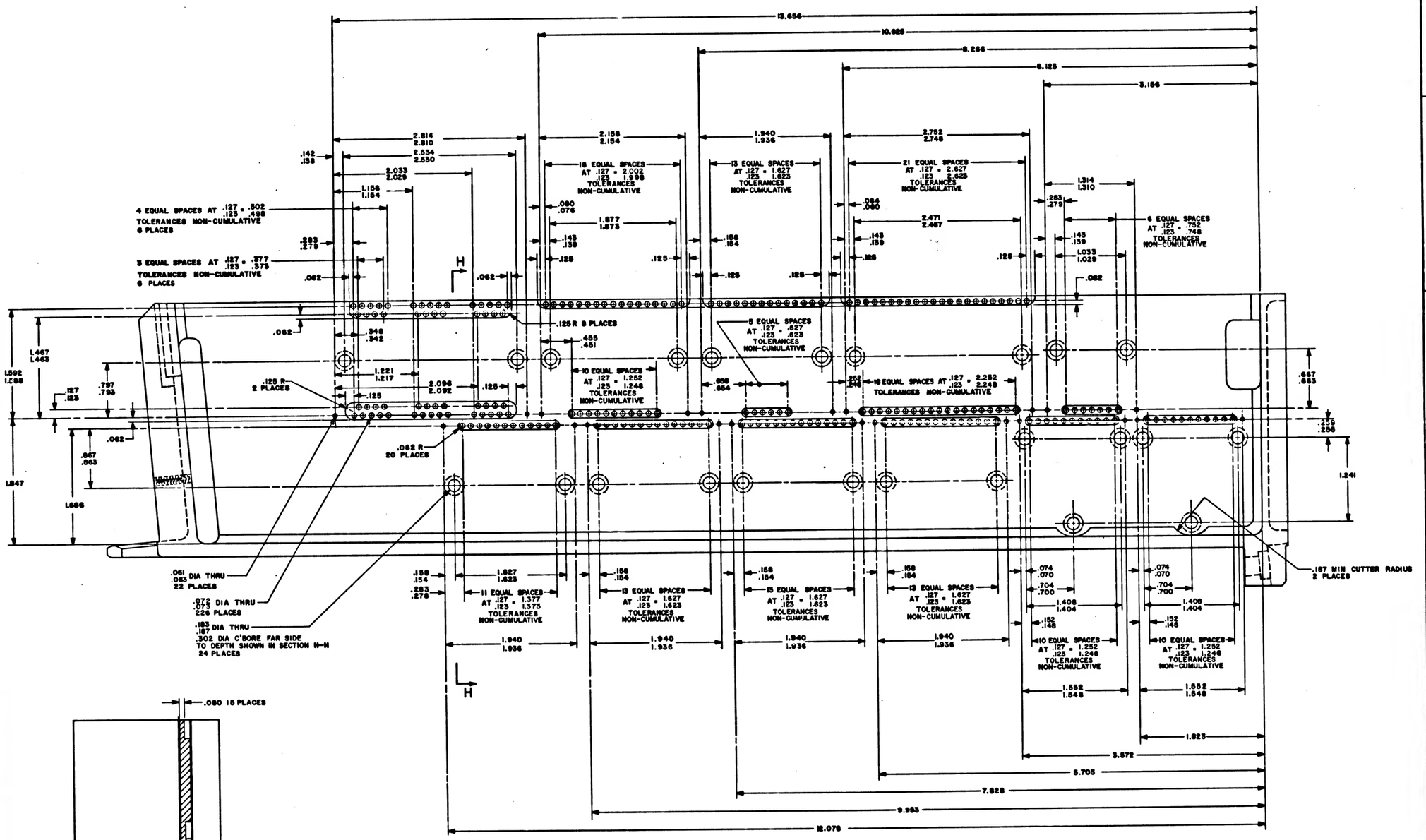
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES
.3 XX ±.02 XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

KEY INSTRUMENTATION LAB	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN	
CHECKED	FRAME, TRAY 8
APPROVAL	
APPROVAL	
NASA APPROVAL	NASA DRAWING NO. 1008178
MIT APPROVAL	CODE IDENT NO. — SIZE E — SCALE 1/1 — WT — SHEET 1 OF 2

INCHES
0
PHOTOGRAPHIC SCALE ONLY

1008178

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION H-H

VIEW B-B
SCALE: 2:1

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007148	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ± 0.02 .XXX ± 0.005 ANGLES ± 30' DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M.I.T. INSTRUMENTATION LAB Cambridge, Mass.
DRAWN J. J. Hunter DATE 9/6/66
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL 9/26/66

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 8

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008178
SCALE 2:1 | WT | SHEET 2 OF 2

1008178

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 06972	2-19-68	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE
GAGE POINT
VIEW A
SCALE 2/1

CUTTER RADIUS
.094 R MAX PERMISSIBLE
.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

SECTION H-H
SCALE 2/1

.075 DIA 48 PLACES
8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE
9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE
5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
4-40 UNC-3B SEE NOTE 6
.137 .139 DIA 60 PLACES
BREAK EDGE THIS SIDE .03
CUTOUT THRU
.005 R MAX PERMISSIBLE
.18 R 2 PLACES
SEE VIEW A

.030 R MAX PERMISSIBLE ONE PLACE ONLY
CUTOUT THRU
BREAK 2 EDGES THIS SIDE .03
.125 DIA x .19 DEEP 2 PLACES FOR MACHINING LOCATION
.062 X 45° TYP
DIMENSION FOR STEP ONLY
.030 R
.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

CUTOUT THRU
.140 DIA .260 .240 DIA SPOTFACE 2 HOLES

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

SECTION F-F

PARTIAL SECTION G-G
SCALE 2:1

SECTION E-E

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.488 17.468

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE +.14 -.10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME. UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND USING 1010729-3. CHARACTERS TO BE TYPE I PER ND10008122. CENTRALIZE AS SHOWN.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

1007169	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± XX ±.02 ± XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN DATE
CHECKED
APPROVED
APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

NASA APPROVAL 1/31/67
MIT APPROVAL

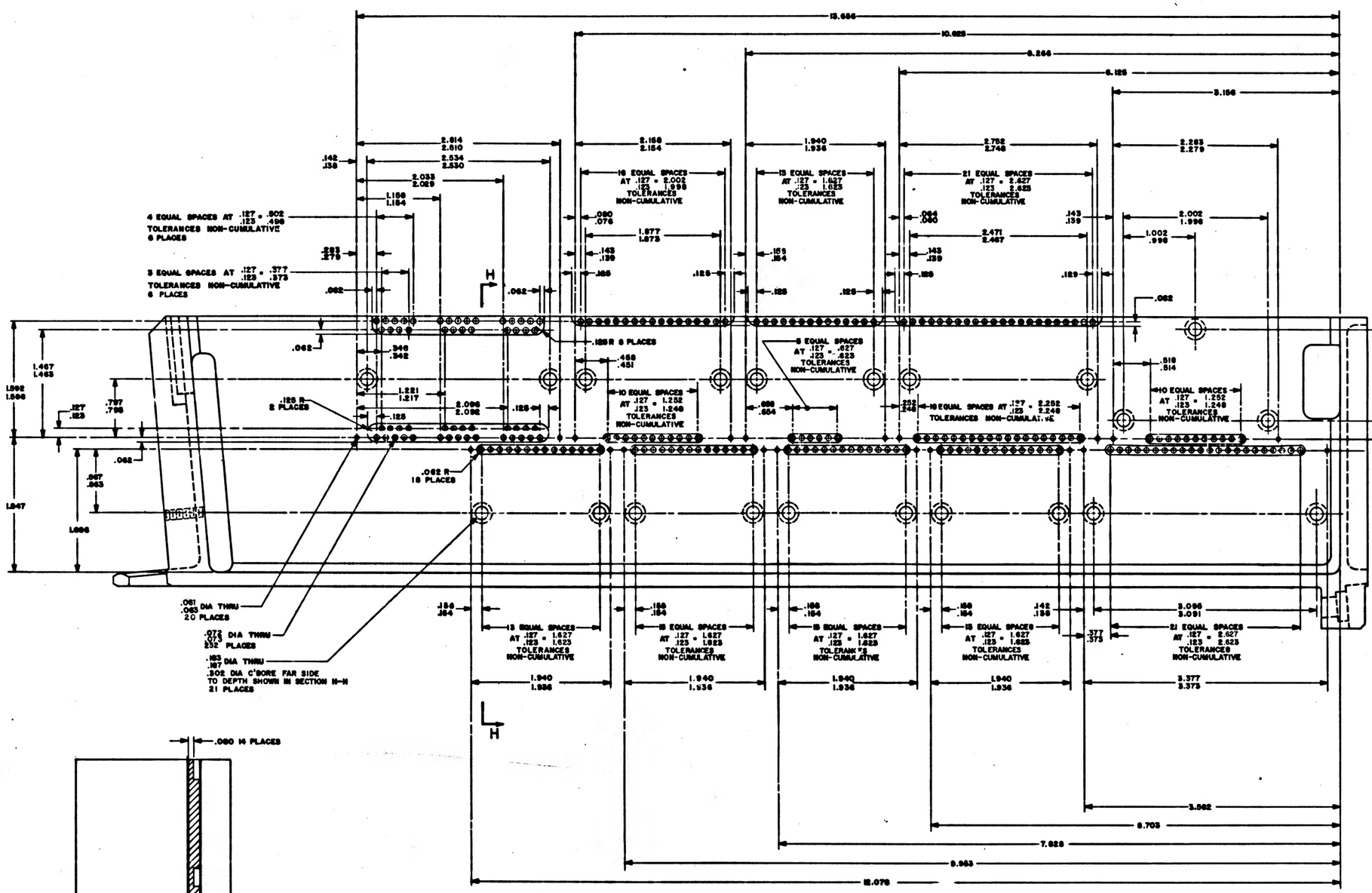
CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008179
SCALE 1/1 WT SHEET 1 OF 3

1008179 A

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS "DAB RELEASE"			
QTY	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDWR 3/4/13	3/4/13	



MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007169			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS DECIMALS ANGLES ± 1/64 .XX ± .02 .XXX ± .005 0°30'
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN D. J. Mitchell DATE 3/4/63
CHECKED
APPROVAL
APPROVAL A. L. Hopkins 3/4/63
NASA APPROVAL [illegible] 5/17/63
MIT APPROVAL A. L. Hopkins

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

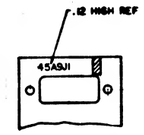
FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008179
SCALE 2:1 | WT | SHEET 2 OF 3

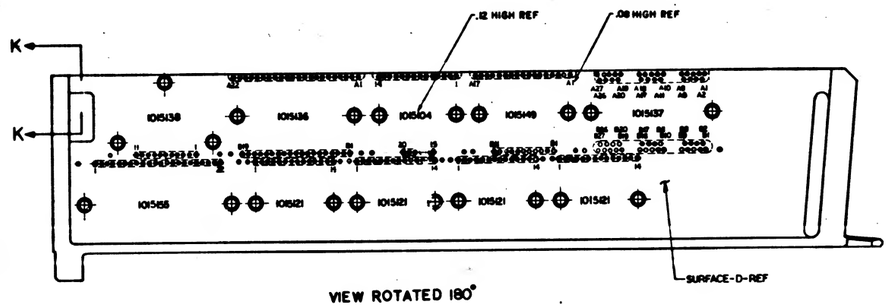
1008179 A

INCHES
PHOTOGRAPHIC SCALE ONLY

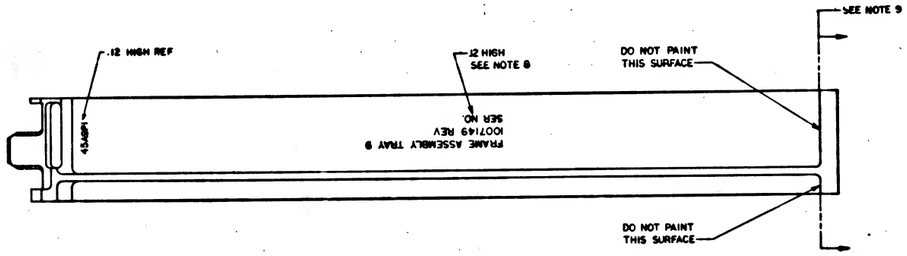
REVISIONS			
DR'D	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 06402		

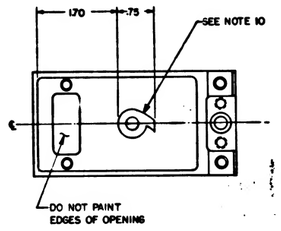


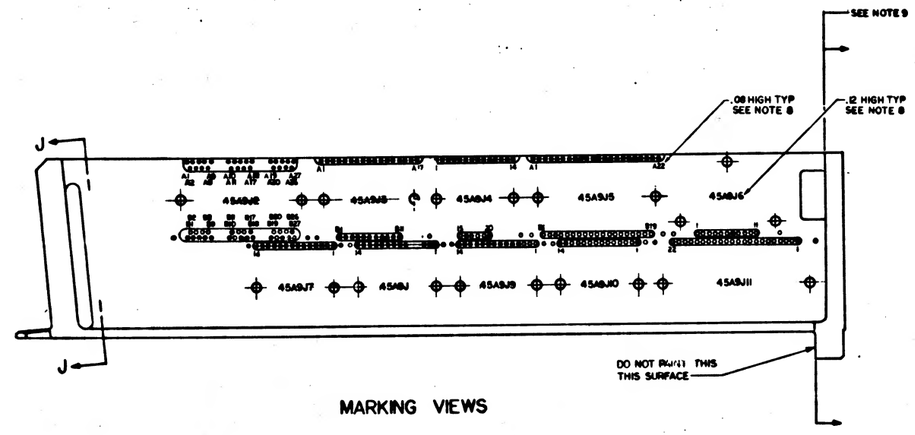
PARTIAL SECTION K-K

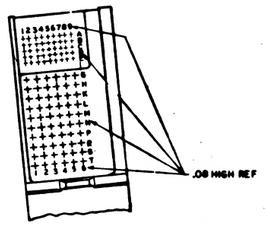


VIEW ROTATED 180°

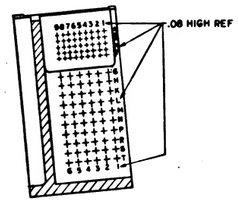








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

1008179 A

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± XX=.02 ANGLES ± DO NOT SCALE THIS DRAWING	MATERIAL — FINISH —
NEXT ASSY	USED ON	APPLICATION	

MIT INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
DRAWN — DATE 11 DEC 63	FRAME, TRAY 9
CHECKED —	
APPROVAL —	
APPROVAL —	
NASA APPROVAL —	CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008179
MIT APPROVAL —	SCALE 1/1 — WT — SHEET 3 OF 3

MASTER

INCHES
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 3-4-77		
B	REVISED PER TDRR 11053		

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.072/.073 DIA 45 PLACES

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ± .002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT
.200 ± .002 PITCH TOTAL
1.800 ±.002 TOLERANCE
NON-CUMULATIVE

5 EQUAL SPACES
AT .200 ±.002 PITCH
TOTAL 1.000 ±.002
TOLERANCE NON-
CUMULATIVE

4-40 UNC-3B
SEE NOTE 6

.137/.139 DIA 60 PLACES

BREAK EDGE THIS SIDE .03

CUTOUT THRU

SEE VIEW A

.487/.491 (FROM GAGE POINT)

.006 R MAX PERMISSIBLE

.16 R
2 PLACES

.12
3 PLACES

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

SECTION F-F

PARTIAL SECTION G-G
SCALE : 2:1

SECTION H-H
SCALE 2/1

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

BREAK 2 EDGES THIS SIDE .03

.125 DIA x .19 DEEP
2 PLACES FOR
MACHINING LOCATION

DIMENSION FOR
STEP ONLY

.062 X 45° TYP

.030 R

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

CUTOUT THRU

.140 DIA
.260/.240 DIA SPOTFACE
2 HOLES

.100 TYP

.015 R MAX PERMISSIBLE

SECTION E-E

.186/.190 DIA CSK 100° x .230/.210

SECTION A-A
2 PLACES

.248

2 .165/.169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .189/.199 DIA

.005 DIA SEE NOTES 6 & 8

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14/.10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER _____ USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND _____ USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

1007169		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES XX ±.02 XXX ±.005 0° 30' DO NOT SCALE THIS DRAWING	MATERIAL SEE NOTE 2
NEXT ASSY	USED ON		HEAT TREATMENT — FINISH SEE NOTE 6
APPLICATION			

MTV INSTRUMENTATION LAB
Contractor Name
DRAWN _____ DATE 4/6/73
CHECKED _____
APPROVAL _____
APPROVAL _____
NASA APPROVAL _____ 5/25/73
MIT APPROVAL _____

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

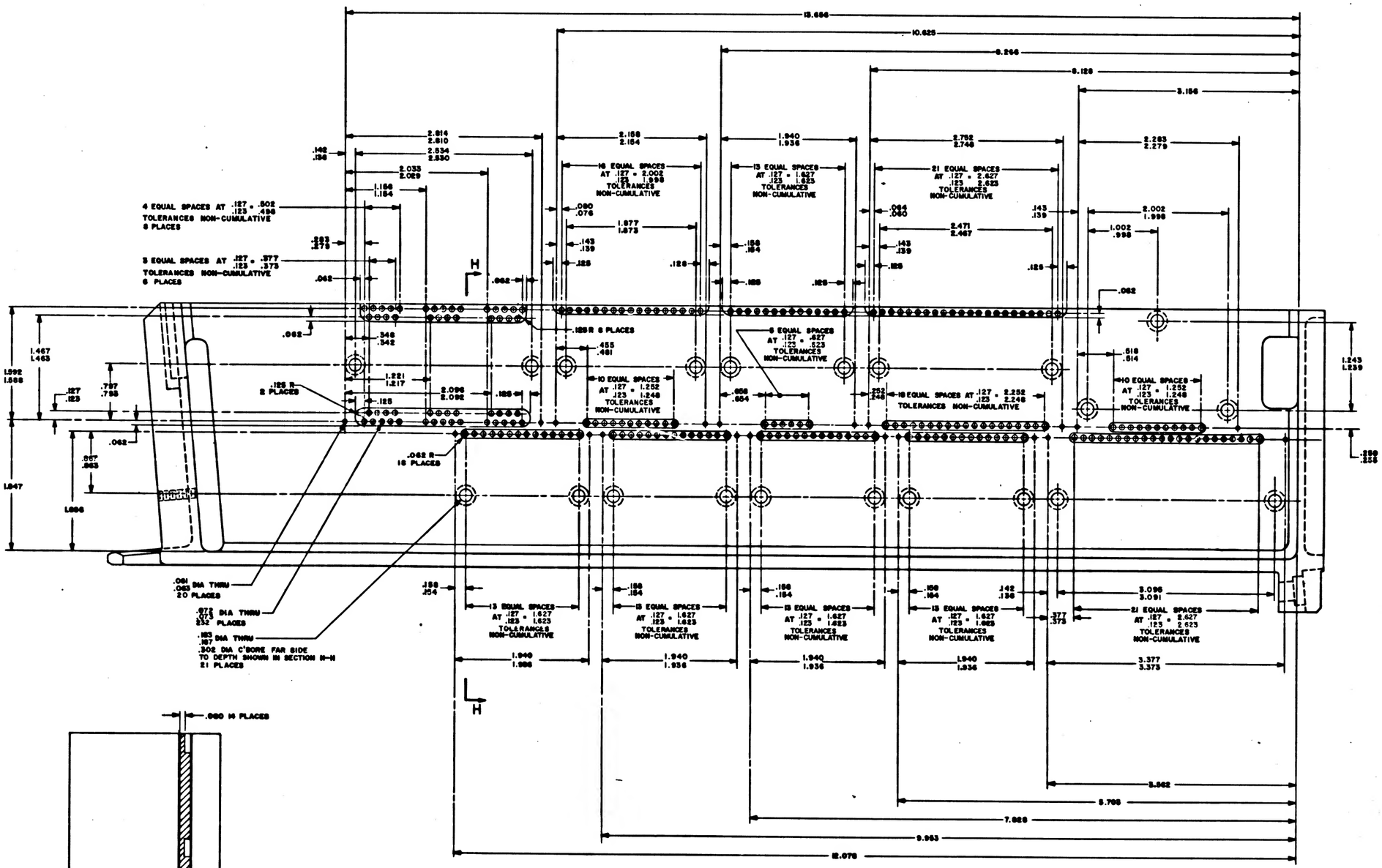
FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008179
SCALE 1/1 | WT | SHEET 1 OF 3

1008179 B

(007169)

SYM	REVISIONS TDAR 5546 DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11053	15 JUL 64	



QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± 1/64 DECIMALS .XX ± .02 .XXX ± .005 ANGLES ± 0°30'
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH

1007169 NEXT ASSY | USED ON | APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [signature] DATE 4/4/64
CHECKED
APPROVED
APPROVED [signature] 4/6/64
NASA APPROVAL [signature] 1/31/64
QUAL APPROVAL [signature]

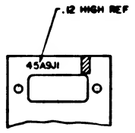
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME, TRAY 9

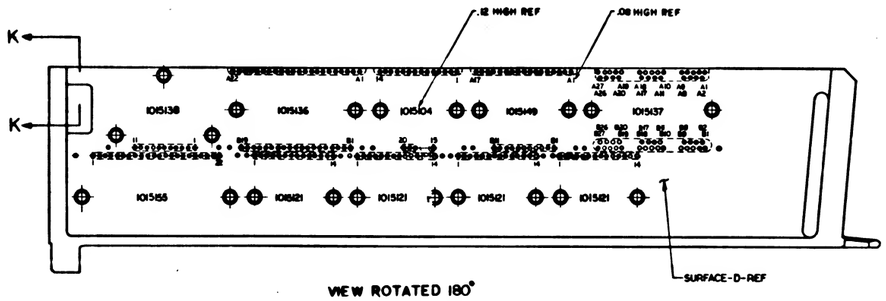
CODE IDENT NO. | SIZE E | NASA DRAWING NO 1008179
SCALE 2:1 | WT | SHEET 2 OF 3

1008179 B

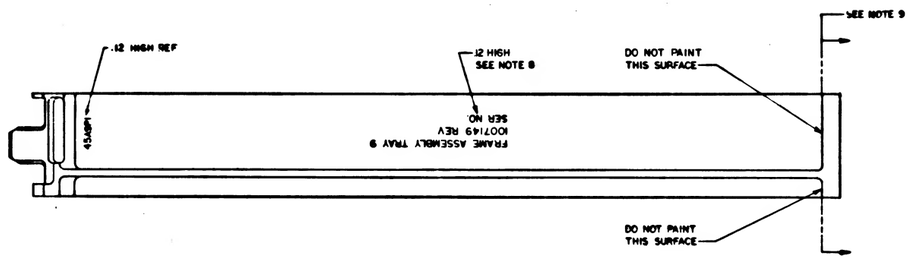
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 06702	11 Dec 63	
B	REVISED PER TDRR NO. 11053	29 Jun 64	

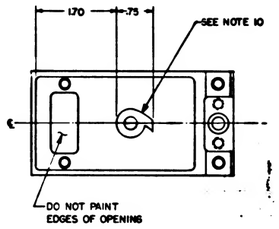


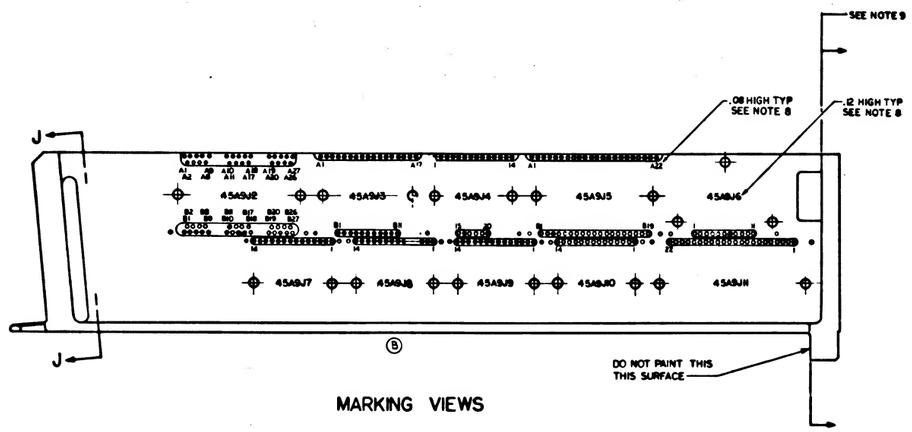
PARTIAL SECTION K-K

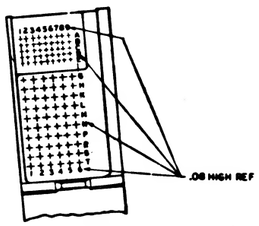


VIEW ROTATED 180°

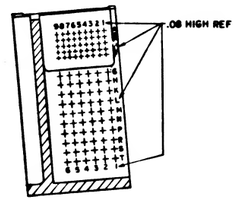








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX± .02 ANGLES ± DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		MATERIAL	DRAWN DATE 9 DEC 63
		HEAT TREATMENT	CHECKED
		FINAL FINISH	APPROVAL
NEXT ASSY	USED ON	APPLICATION	NASA APPROVAL
			MIT APPROVAL

FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008179

SCALE 1/1 | WT | SHEET 3 OF 3

1008179 B

ZONE	REVISIONS TDRR 05545			
	SYM	DESCRIPTION	DATE	APPROVAL
D	A	REVISED PER TDRR 11033	2/27/63	
D	B	REVISED PER TDRR 11053	3/5/63	
	C	REVISED PER TDRR 11320	4/30/63	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE [-D-]
STEP BELOW SURFACE NOT PERMITTED

.005 IN/IN

.140 DIA
.260 DIA SPOTFACE
.240
2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

CUTTER RADIUS

.094 R MAX PERMISSIBLE

.125 MAX.

.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE [-F-]

SECTION H-H
SCALE 2/1

.072
.073 DIA 45 PLACES

8 EQUAL SPACES AT .125 ± .002 PITCH
TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ± .002
PITCH TOTAL .500 ± .002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT
.200 ± .002 PITCH TOTAL
1.800 ± .002 TOLERANCE
NON-CUMULATIVE

5 EQUAL SPACES
AT .200 ± .002 PITCH
TOTAL 1.000 ± .002
TOLERANCE NON-
CUMULATIVE

.040 x 45° ± 5°
2 PLACES
BLEND WITH
.12 R

4-40 UNC-3B
SEE NOTE 6

.137
.139 DIA 60 PLACES

CUTOUT THRU

BREAK EDGE THIS SIDE .03

SEE VIEW A

.005 R MAX PERMISSIBLE

.16 R
2 PLACES

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

BREAK 2 EDGES THIS SIDE .03

.125 DIA x .19 DEEP
2 PLACES FOR
MACHINING LOCATION

.062 x 45° TYP

DIMENSION FOR
STEP ONLY

.030 R

.005 MAX ALLOWABLE STEP ABOVE SURFACE [-E-]
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER
PERMANENT MARKING FOR
PROCESSING PERMITTED
IN THIS AREA. ELECTRO-
CHEMICAL ETCH .12 HIGH
CHARACTERS PER ND1002019
LOCATE CENTRALLY

SECTION F-F

PARTIAL SECTION G-G
SCALE: 2:1

SECTION E-E

.729 REF — 16.7195 / 16.7165 (FROM GAGE POINT) — 17.488 / 17.468

.186 DIA
.190 CSK 100° x .230
.220

SECTION A-A
2 PLACES

.248
2
.165 / .169 DIA THRU
10-32UNF-2B THRU
82° ±1° CSK, .189 / .199 DIA
.005 DIA
SEE NOTES 6 & 8

SECTION B-B
2 PLACES

.272 DIA
C'BORE .406 DIA x .142 DEEP
.281
.250 / .246
.245
.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 - .015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME, UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

10071c9	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT: —
FINAL FINISH: SEE NOTE 6

M I T INSTRUMENTATION LAB Cambridge 39 Mass.
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

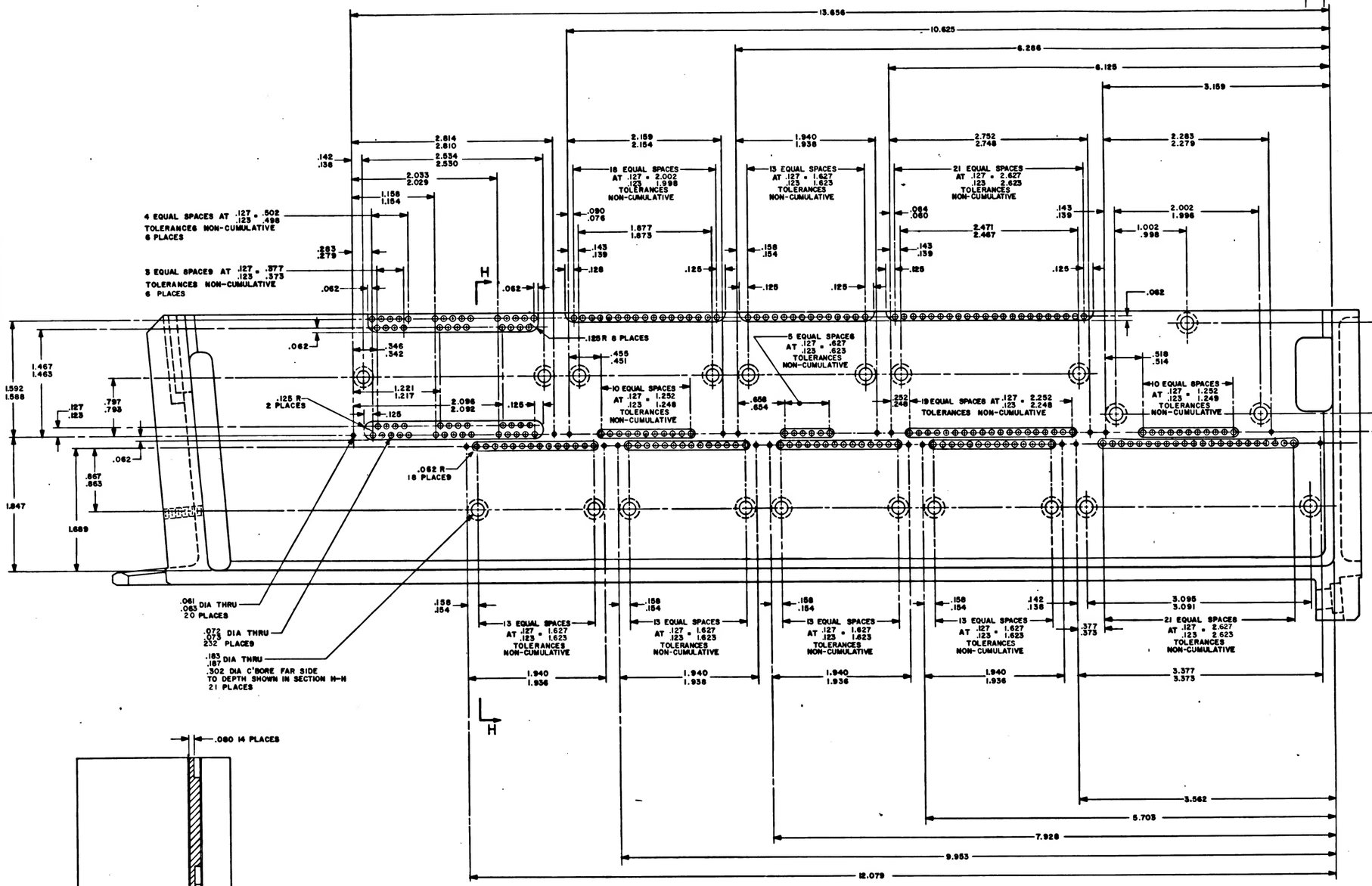
DRAWN [illegible] DATE 4/4/63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL 4/17/63
MIT APPROVAL

FRAME, TRAY 9

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008179
SCALE 1/1 | WT | SHEET 1 OF 3

1008179 C

SYM	REVISIONS TDRR 05545 DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 11053	25 JUL 69	JWP
B	REVISED PER TDRR 11053	25 JUL 69	JWP
C	REVISED PER TDRR 11320	18 AUG 69	JWP



SECTION H-H

VIEW B-B
SCALE: 2:1

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
	LIST OF MATERIALS		

1007109			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± .XX: .02 ± .030
.XXX: .005
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN [illegible] DATE 16 Feb 68
CHECKED
APPROVAL
APPROVAL [illegible] 16 Feb 68
NASA APPROVAL [illegible] 10/3-9/69
MIT APPROVAL [illegible]

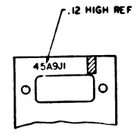
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME, TRAY 9

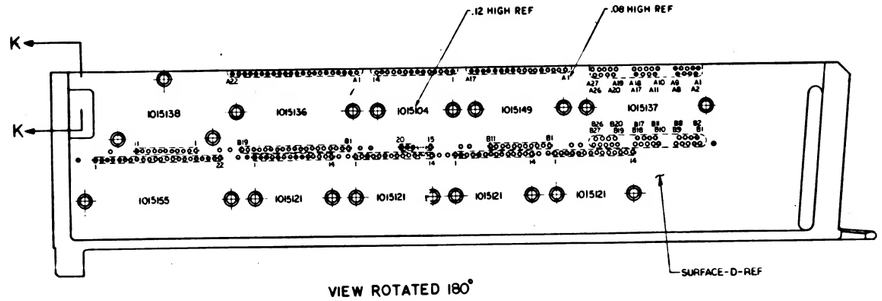
CODE IDENT NO | SIZE E | NASA DRAWING NO 1008179
SCALE 2:1 | WT | SHEET 2 OF 2

1008179 C

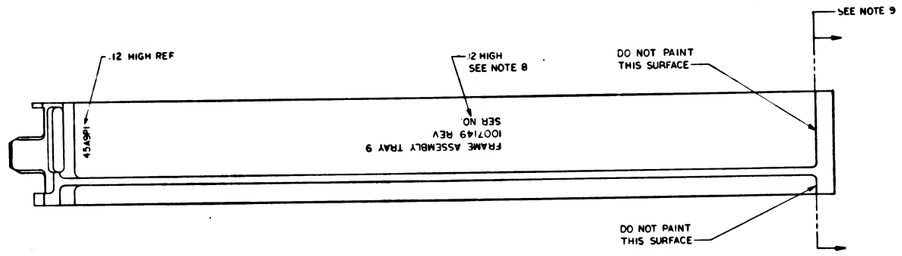
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 11078	7/15/64	[illegible]
B	REVISED PER TDRR NO. 11053	29 JUL 64	[illegible]
C	REVISED PER TDRR 11320	18 AUG 64	[illegible]

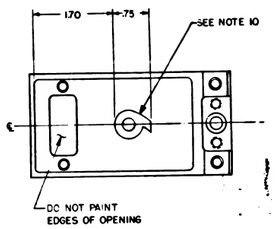


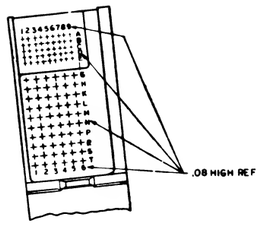
PARTIAL SECTION K-K

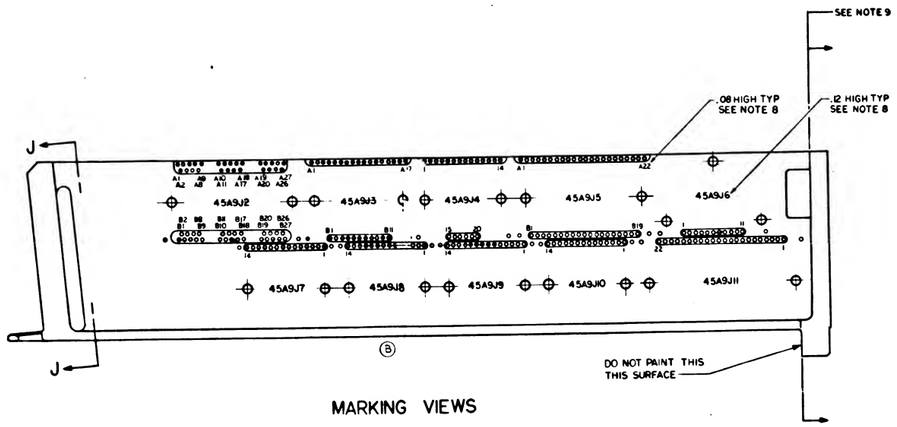


VIEW ROTATED 180°

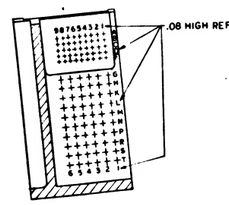








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO

LIST OF MATERIALS

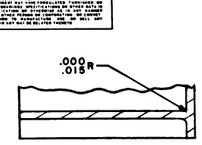
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± XX=.02 = DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINISH —	M I T INSTRUMENTATION LAB CAMBRIDGE MASS. MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON		DRAWN [illegible] DATE 4/15/64
APPLICATION			CHECKED [illegible]
			APPROVAL [illegible]
			APPROVAL —
			NASA APPROVAL [illegible]
			MIT APPROVAL [illegible]

FRAME, TRAY 9

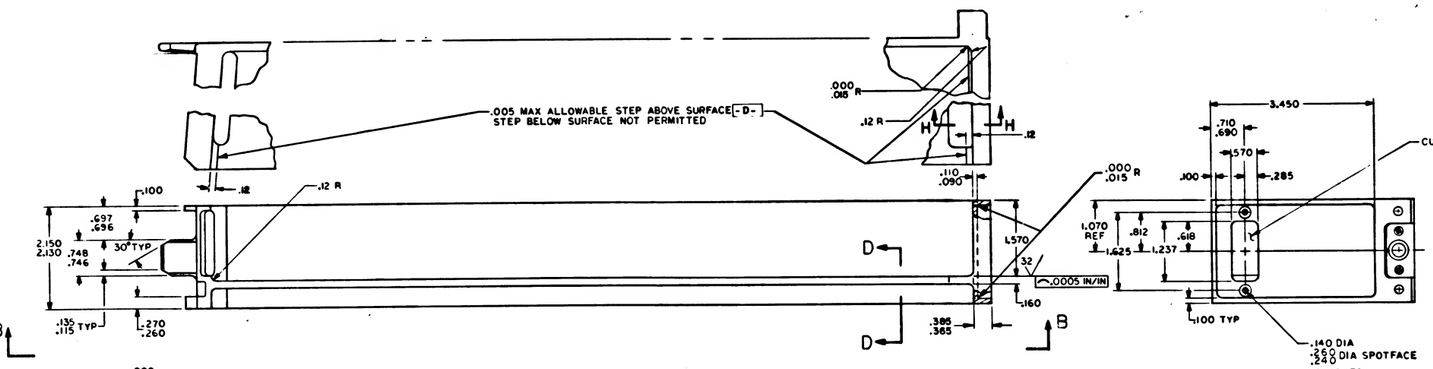
CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008179
SCALE 1/1	WT	SHEET 3 OF 3

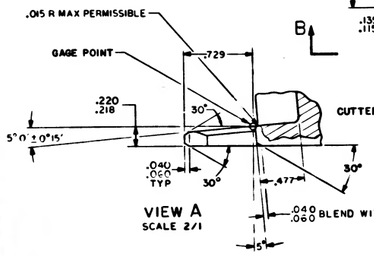
1008179 C

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11053		
B	REVISED PER TDRR 11053		
C	REVISED PER TDRR 11320		
D	REVISED PER TDRR 11321		

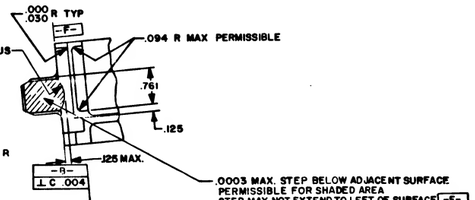


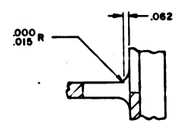
SECTION D-D



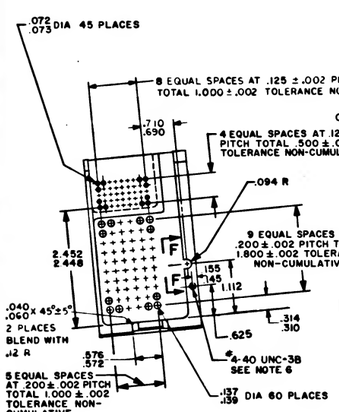


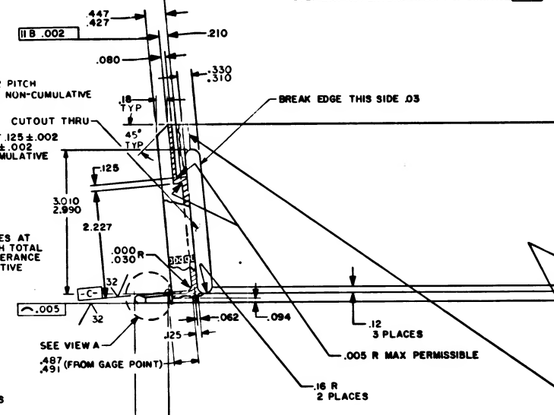
VIEW A
SCALE 2/1

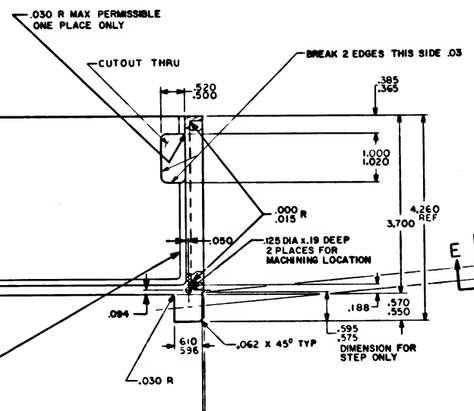


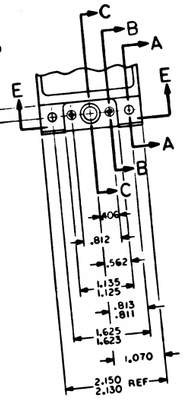


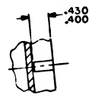
SECTION H-H
SCALE 2/1



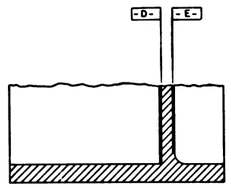






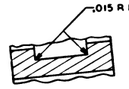


SECTION F-F



PARTIAL SECTION G-G
SCALE : 2:1

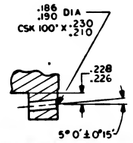
PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY



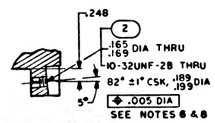
SECTION E-E

.729 REF
16.7195
16.7165 (FROM GAGE POINT)
17.488
17.468

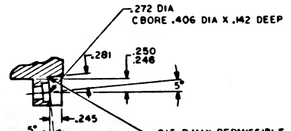
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME. UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN



SECTION A-A
2 PLACES



SECTION B-B
2 PLACES



SECTION C-C

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

1007169			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
XX ±.02
XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
—
FINAL FINISH
SEE NOTE 6

NAME	INSTRUMENTATION LAB Cambridge, Mass
BID ID	CONTRACT
DRAWN	DATE 12/5/62
CHECKED	
APPROVAL	
APPROVAL	12/6/62
NASA APPROVAL	12/13/62
SMT APPROVAL	

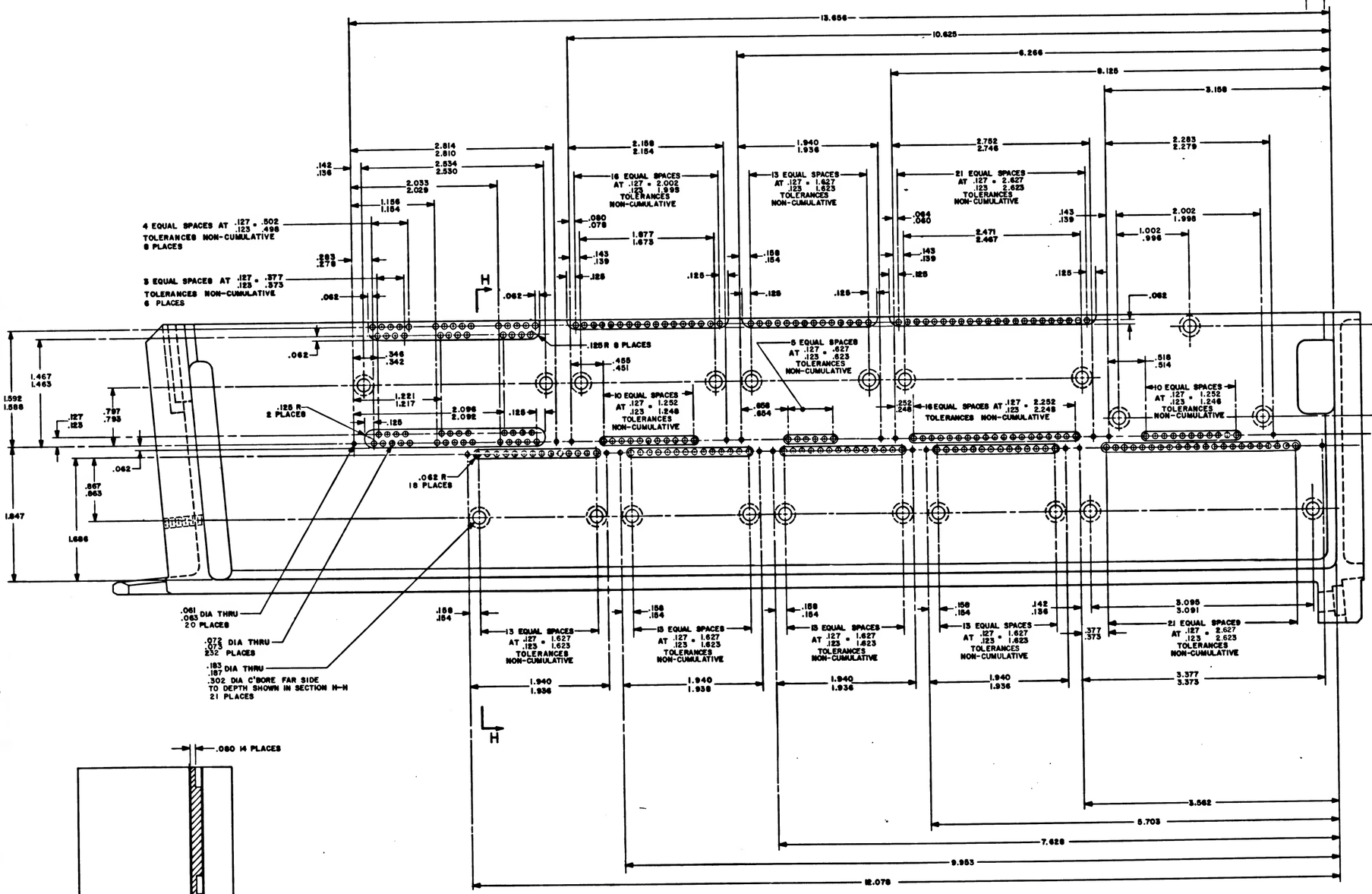
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME,
TRAY 9

CODE IDENT NO.	SIZE	NASA DRAWING NO
	E	1008179
SCALE 1/1	WT	SHEET 1 OF 3

1008179 D

REVISIONS TDRR 15545			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11053	5-1-63	
B	REVISED PER TDRR 11053	5-10-63	
C	REVISED PER TDRR 11320	6-24-63	
D	REVISED PER TDRR 11321	6-25-63	

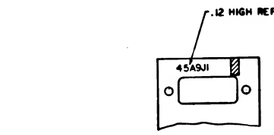


QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

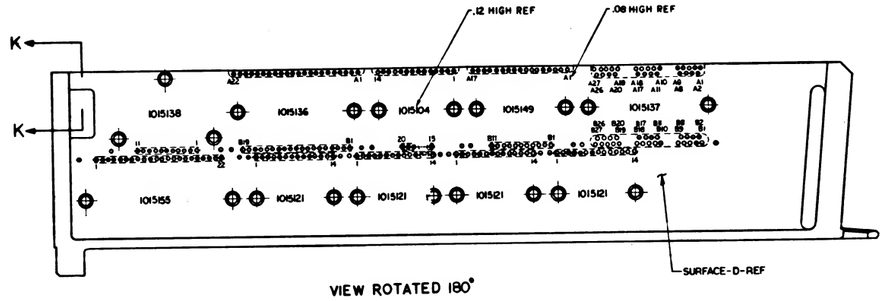
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES = ±1/64 XXX ±.02 XXX ±.005 ±0°30' DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
MATERIAL —	DRAWN [illegible] DATE 5-1-63	FRAME, TRAY 9	
HEAT TREATMENT —	CHECKED		
FINAL FINISH —	APPROVAL		
1007169	NASA APPROVAL [illegible] 5/23/63	CODE IDENT NO	SIZE E / NASA DRAWING NO 1008179
NEXT ASSY / USED ON	MIT APPROVAL [illegible]	SCALE 2:1	WT / SHEET 2 OF [illegible]
APPLICATION			

1008179 D

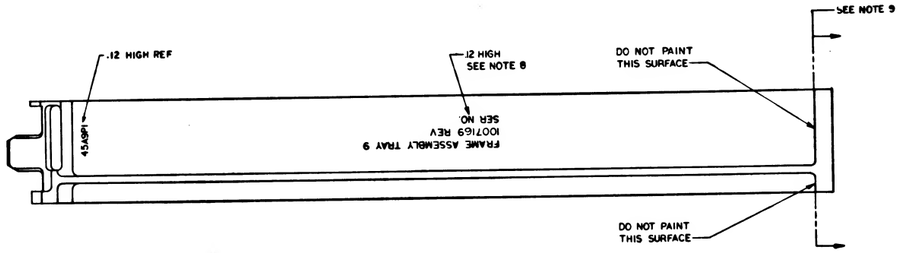
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR 3492	7/24/64	[illegible]
B	REVISED PER TDRR NO. 11053	29 JUL 64	[illegible]
C	REVISED PER TDRR 11320	6 AUG 64	[illegible]
D	REVISED PER TDRR 11321	6 AUG 64	[illegible]

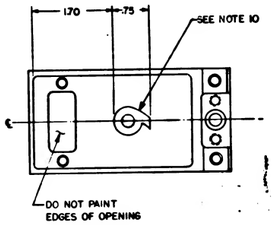


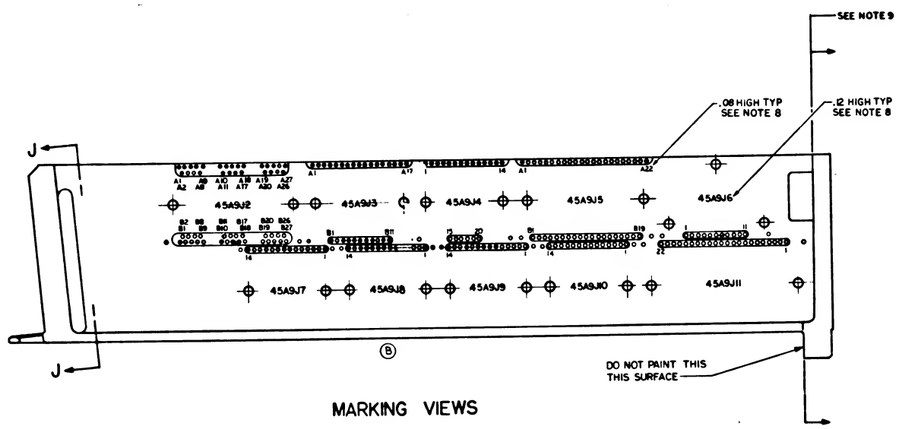
PARTIAL SECTION K-K

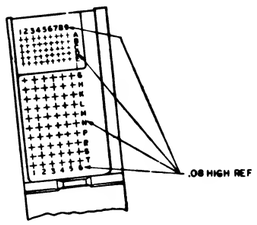


VIEW ROTATED 180°

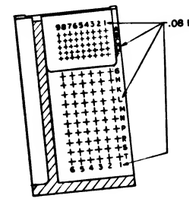








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .XX± .02 ANGLES ± DO NOT SCALE THIS DRAWING MATERIAL — HEAT TREATMENT — FINAL FINISH —	M I T INSTRUMENTATION LAB Cambridge 39, Mass. MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON		
APPLICATION			

DRAWN [illegible] DATE 8 DEC 63
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

FRAME, TRAY 9

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	E	1008179

SCALE 1/1 WT SHEET 3 OF 3

1008179 D

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11053		
C	REVISED PER TDRR 11320		
D	REVISED PER TDRR 11321		
E	REVISED PER TDRR 14579	8 DEC 64	

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

CUTOUT THRU

.140 DIA
.260 DIA SPOTFACE
2 HOLES

.005 IN/IN

.015 R MAX PERMISSIBLE

GAGE POINT

VIEW A
SCALE 2/1

.030 R TYP -F-

.094 R MAX PERMISSIBLE

CUTTER RADIUS

.125 MAX.

-B-
⊥ C .004

.0003 MAX. STEP BELOW ADJACENT SURFACE
PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

SECTION H-H
SCALE 2/1

.072
.073 DIA 45 PLACES

8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE

4 EQUAL SPACES AT .125 ±.002
PITCH TOTAL .500 ±.002
TOLERANCE NON-CUMULATIVE

9 EQUAL SPACES AT
.200 ±.002 PITCH TOTAL
1.800 ±.002 TOLERANCE
NON-CUMULATIVE

.094 R

4-40 UNC-3B
SEE NOTE 6

.040
.060 x 45° ±5°
2 PLACES
BLEND WITH
.12 R

5 EQUAL SPACES
AT .200 ±.002 PITCH
TOTAL 1.000 ±.002
TOLERANCE, NON-
CUMULATIVE

.137
.139 DIA 60 PLACES

SECTION F-F

.040
.060 BLEND WITH .12 R

BREAK EDGE THIS SIDE .03

CUTOUT THRU

.005 R MAX PERMISSIBLE

.16 R
2 PLACES

SEE VIEW A

.487
.491 (FROM GAGE POINT)

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

.030 R MAX PERMISSIBLE
ONE PLACE ONLY

CUTOUT THRU

BREAK 2 EDGES THIS SIDE .03

.125 DIA x .19 DEEP
2 PLACES FOR
MACHINING LOCATION

.062 x 45° TYP

DIMENSION FOR
STEP ONLY

.030 R

PART NUMBER AND OTHER
PERMANENT MARKING FOR
PROCESSING PERMITTED
IN THIS AREA. ELECTRO-
CHEMICAL ETCH .12 HIGH
CHARACTERS PER ND1002019
LOCATE CENTRALLY

-D- -E-

PARTIAL SECTION G-G
SCALE : 2:1

.015 R MAX PERMISSIBLE

SECTION E-E

.729 REF

16.7195
16.7165 (FROM GAGE POINT)

17.488
17.468

.186 DIA
.190 CSK 100° x .230
.210

.228
.226

5° 0' ±0°15'

SECTION A-A
2 PLACES

.248

2

.165
.169 DIA THRU

10-32UNF-2B THRU

82° ±1° CSK, .199
.193 DIA

.005 DIA

SEE NOTES 6 & 8

SECTION B-B
2 PLACES

.272 DIA
CBORE .406 DIA x .142 DEEP

.281

.250
.246

5°

.245

.015 R MAX PERMISSIBLE

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE .14 / .10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING. SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME. UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
2	10001115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

10071c9	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
—
FINAL FINISH
SEE NOTE 6

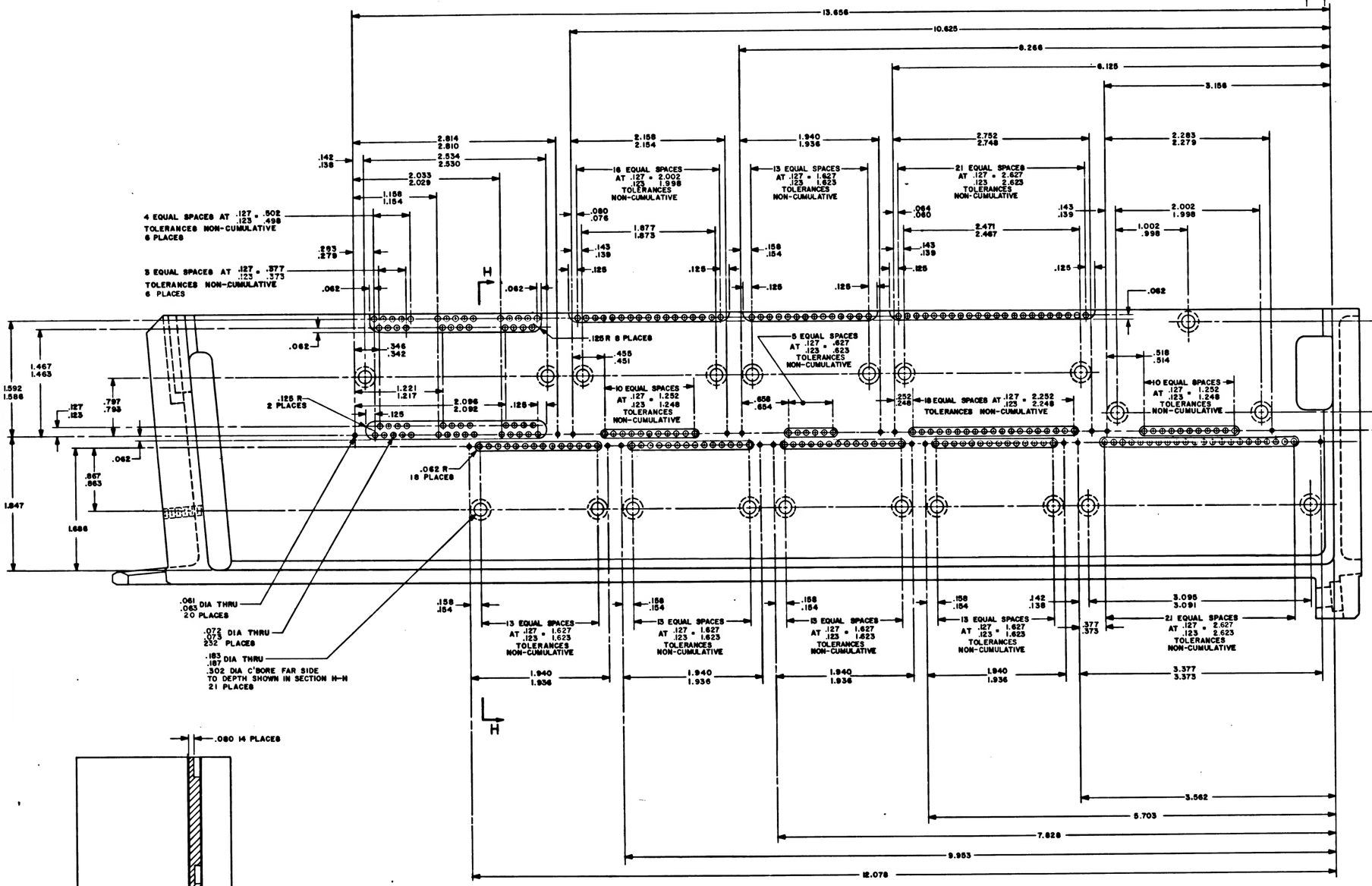
M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS
CONTRACT
DRAWN J. Hart DATE 4/2/63
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

FRAME,
TRAY 9

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008179
SCALE 1/1 | WT | SHEET 1 OF 3

1008179 E

REVISIONS TDRR 5545			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11083	25 JUL 64	
C	REVISED PER TDRR 11320	15 OCT 64	
D	REVISED PER TDRR 11321	8 DEC 64	
E	REVISED PER TDRR 14579	6 APR 65	



QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO.
	LIST OF MATERIALS		

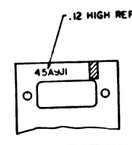
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES = XX±.02 XXX±.005 ±30' DO NOT SCALE THIS DRAWING	M I T INSTRUMENTATION LAB C-4000-0000 10-600
MATERIAL —	MANNED SPACECRAFT CENTER HOUSTON TEXAS
HEAT TREATMENT —	DRAWN DATE 24 Feb 65
FINAL FINISH —	CHECKED
1007[illegible]9 NEXT ASSY / USED ON APPLICATION	APPROVAL
	APPROVAL
	NASA APPROVAL
	MIT APPROVAL

FRAME, TRAY 9

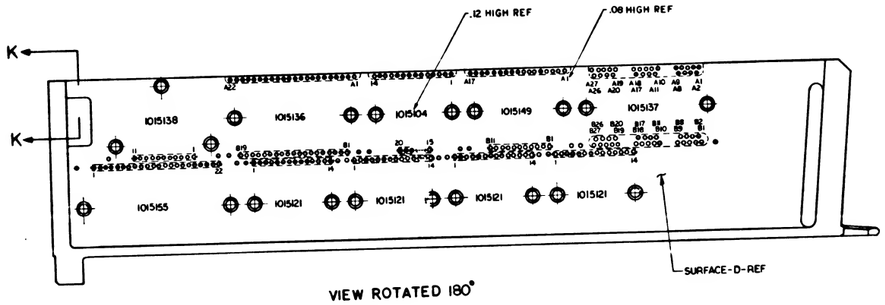
CODE IDENT NO	SIZE	NASA DRAWING NO
	E	1008179
SCALE 2:1	WT	SHEET 2 OF

1008179

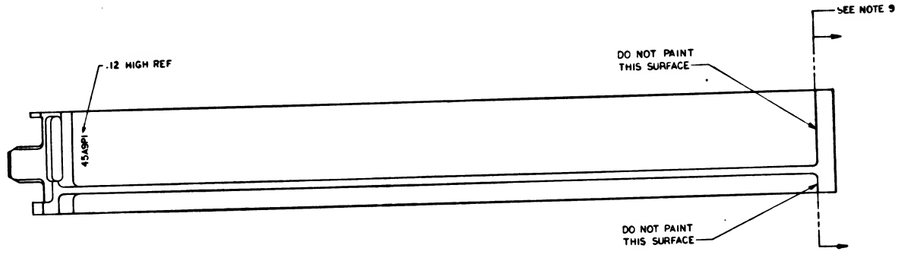
SYM	REVISIONS DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR NO. 11053	29 JUL 64	[illegible]
C	REVISED PER TDRR 11320	6 NOV 64	[illegible]
D	REVISED PER TDRR 1132	6 DEC 64	[illegible]
E	REVISED PER TDRR 1145-9	8 DEC 64	[illegible]

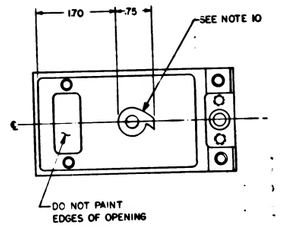


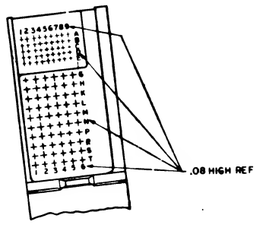
PARTIAL SECTION K-K

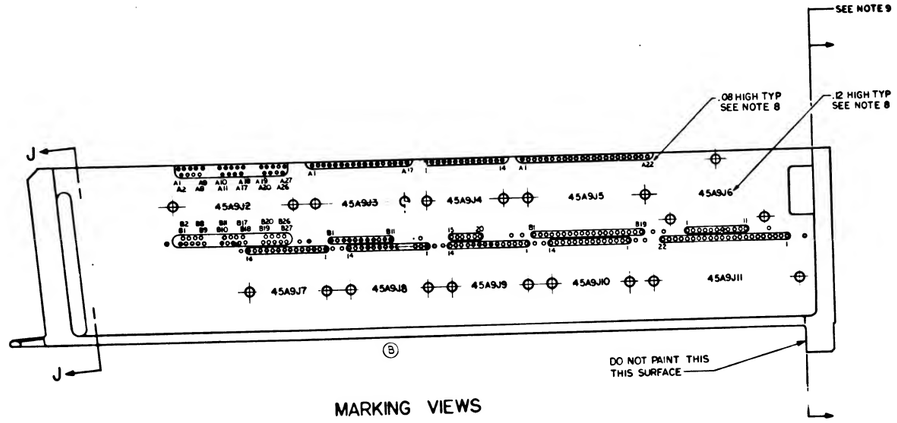


VIEW ROTATED 180°

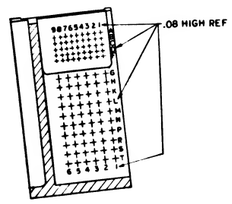








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS XX± .02 ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB
DRAWN [illegible] DATE 8 DEC 64
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL —
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO | SIZE E | NASA DRAWING NO 1008179
SCALE 1/1 | WT | SHEET 3 OF 3

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 11053		
B	REVISED PER TDRR 11320		
C	REVISED PER TDRR 11321		
D	REVISED PER TDRR 14579	8 DEC 64	
E	REVISED PER TDRR 18692	9 MAY 68	
F			

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE
GAGE POINT
VIEW A
SCALE 2/1

CUTTER RADIUS
.094 R MAX PERMISSIBLE
.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

SECTION H-H
SCALE 2/1

.072 .073 DIA 45 PLACES
8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE
9 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.800 ± .002 TOLERANCE NON-CUMULATIVE
5 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON-CUMULATIVE
4-40 UNC-3B SEE NOTE 6
.137 .139 DIA 60 PLACES
.040 .060 x 45° ±5° 2 PLACES BLEND WITH .12 R

CUTOUT THRU
BREAK EDGE THIS SIDE .03
.005 R MAX PERMISSIBLE
.16 R 2 PLACES
SEE VIEW A
.487 .491 (FROM GAGE POINT)

.030 R MAX PERMISSIBLE ONE PLACE ONLY
CUTOUT THRU
BREAK 2 EDGES THIS SIDE .03
.125 DIA x .19 DEEP 2 PLACES FOR MACHINING LOCATION
DIMENSION FOR STEP ONLY
.062 x 45° TYP
.030 R

.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

CUTOUT THRU
.140 DIA
.250 DIA SPOTFACE
2 HOLES

SECTION F-F

PARTIAL SECTION G-G
SCALE : 2:1

SECTION E-E

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.489 17.468

SECTION A-A
2 PLACES

SECTION B-B
2 PLACES

SECTION C-C

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE +.14 -.10 UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF FIND NO. 1 AND FIND NO. 2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER
8. MARK CHARACTERS BLACK PER ND1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN
9. PAINT PER ND1002110 TYPE II, USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE AND END OF FRAME. UNLESS OTHERWISE SPECIFIED ALL HOLES TO BE FREE OF PAINT
10. PAINT PER ND1002110 TYPE II, USING 1010729-3. CHARACTERS TO BE TYPE I PER ND1002122. CENTRALIZE AS SHOWN.
11. AFTER PLATING ROUGHENING OF THE SURFACES TO BE ENCAPSULATED IS PERMITTED. PLATED SURFACE MUST BE CONTINUOUS.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1	1008179-1	FRAME, TRAY	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MIT INSTRUMENTATION LAB Cambridge Mass.
TOLERANCES ON FRACTIONS ± DECIMALS .XX ±.02 .XXX ±.005 ANGLES 0° 30'	DRAWN J. Stetson DATE 4/24/64
DO NOT SCALE THIS DRAWING	CHECKED
MATERIAL SEE NOTE 2	APPROVAL
HEAT TREATMENT —	APPROVAL D. Hart 10/25/65
FINAL FINISH SEE NOTE 6	NASA APPROVAL 3/27/63
NEXT ASSY 1007129 USED ON APPLICATION	MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME, TRAY 9

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	E	1008179
SCALE 1/1	WT	SHEET 1 OF 3

1008179 F

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR		
B	REVISED PER TDRR 11053	28 JUL 64	
C	REVISED PER TDRR 11320	18 AUG 64	
D	REVISED PER TDRR 11321	21 AUG 64	
E	REVISED PER TDRR 14579	5 DEC 64	
F	REVISED PER TDRR 18492	8 MAY 65	

13.658
10.625
8.288
6.125
3.158

2.814 / 2.810
2.534 / 2.530
2.033 / 2.029
1.158 / 1.154
.142 / .138
4 EQUAL SPACES AT .127 = .502 .123 = .498 TOLERANCES NON-CUMULATIVE 8 PLACES
.283 / .279
5 EQUAL SPACES AT .127 = .377 .123 = .373 TOLERANCES NON-CUMULATIVE 6 PLACES
.062

2.158 / 2.154
16 EQUAL SPACES AT .127 = 2.002 .123 = 1.998 TOLERANCES NON-CUMULATIVE
.080 / .076
1.877 / 1.873
.143 / .139
.125

1.940 / 1.938
13 EQUAL SPACES AT .127 = 1.627 .123 = 1.623 TOLERANCES NON-CUMULATIVE
.158 / .154
.125

2.752 / 2.748
21 EQUAL SPACES AT .127 = 2.627 .123 = 2.623 TOLERANCES NON-CUMULATIVE
.084 / .080
.143 / .139
2.471 / 2.467
.125

2.283 / 2.279
2.002 / 1.998
1.002 / .998
.143 / .139
.125
.062

H — H

.125 R 8 PLACES
.082
.346 / .342
.455 / .451
1.221 / 1.217
2.098 / 2.092
.125
.125 R 2 PLACES
10 EQUAL SPACES AT .127 = 1.252 .123 = 1.248 TOLERANCES NON-CUMULATIVE
5 EQUAL SPACES AT .127 = .627 .123 = .623 TOLERANCES NON-CUMULATIVE
.656 / .654
.252 / .248
18 EQUAL SPACES AT .127 = 2.252 .123 = 2.248 TOLERANCES NON-CUMULATIVE
.518 / .514
10 EQUAL SPACES AT .127 = 1.252 .123 = 1.248 TOLERANCES NON-CUMULATIVE

1.592 / 1.588
1.467 / 1.463
.127 / .123
.797 / .793
1.243 / 1.239
.259 / .255
.062
.867 / .863
1.847
1.688
.082 R 18 PLACES

.061 / .063 DIA THRU 20 PLACES
.072 / .075 DIA THRU 232 PLACES
.183 / .187 DIA THRU .302 DIA C'BORE FAR SIDE TO DEPTH SHOWN IN SECTION H-H 21 PLACES

.158 / .154
13 EQUAL SPACES AT .127 = 1.627 .123 = 1.623 TOLERANCES NON-CUMULATIVE
1.940 / 1.936
.142 / .138
.377 / .373
3.095 / 3.091
21 EQUAL SPACES AT .127 = 2.627 .123 = 2.623 TOLERANCES NON-CUMULATIVE
3.377 / 3.373

3.562
5.703
7.828
9.953
12.078

VIEW B-B
SCALE: 2:1

.080 14 PLACES
.074 / .066

SECTION H-H

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
= XX± .02 ±30'
XXX± .005
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

1007169
NEXT ASSY | USED ON
APPLICATION

M I T INSTRUMENTATION LAB Cambridge, Mass.
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

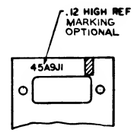
DRAWN [illegible] DATE 3/6/63
CHECKED —
APPROVAL —
APPROVAL [illegible] 3/6/63
NASA APPROVAL [illegible] 3/6/63
MIT APPROVAL [illegible]

FRAME, TRAY 9

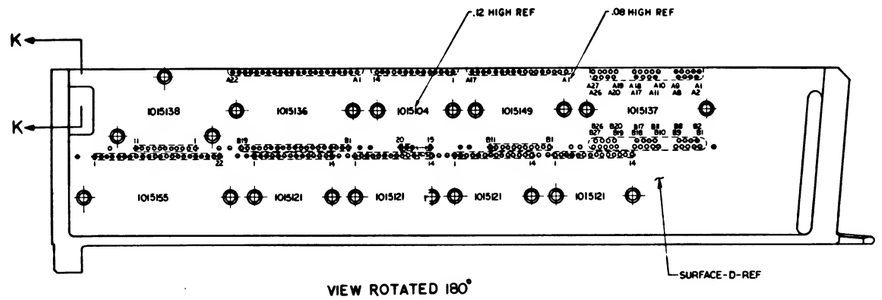
CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1008179
SCALE 2:1 | WT | SHEET 2 OF —

1 1008179 F

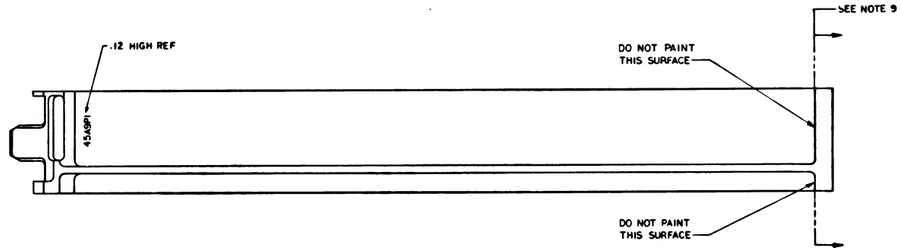
SYM	DESCRIPTION	DATE	APPROVAL
A	THIS SHEET ADDED PER TDRR [illegible]	[illegible]	[illegible]
B	REVISED PER TDRR NO. 11053	29 JUL 64	[illegible]
C	REVISED PER TDRR 11320	15 AUG 64	[illegible]
D	REVISED PER TDRR 11132	[illegible]	[illegible]
E	REVISED PER TDRR 14579	8 DEC 64	[illegible]
F	REVISED PER TDRR 18092	[illegible]	[illegible]

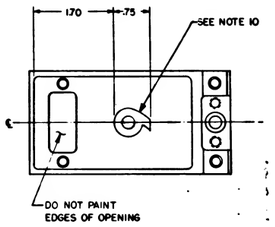


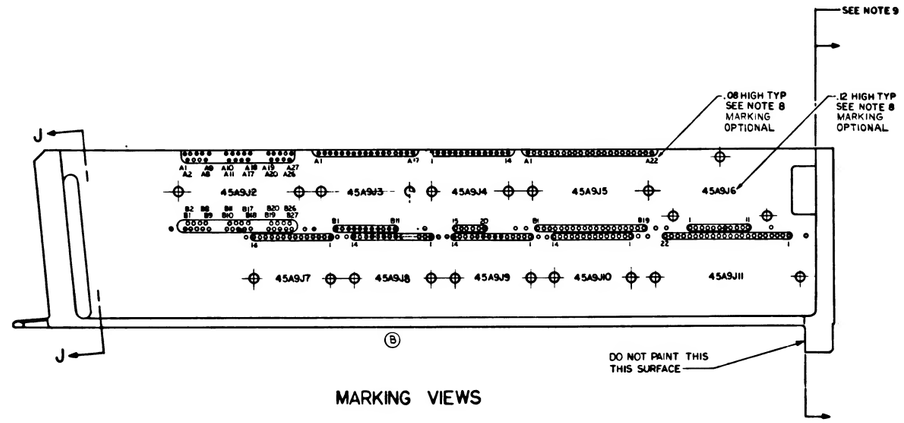
PARTIAL SECTION K-K

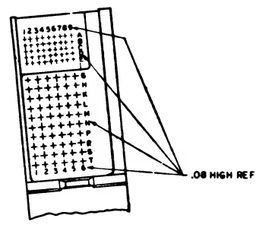


VIEW ROTATED 180°

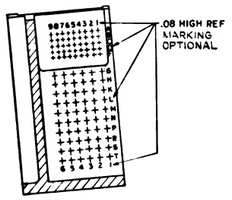








MARKING VIEWS



SECTION J-J

REV A THIS SHEET ADDED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX=.02 ANGLES ±	M I T INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DO NOT SCALE THIS DRAWING	DRAWN [illegible] DATE 9 DEC 63	FRAME, TRAY 9	
MATERIAL --	CHECKED [illegible]		
HEAT TREATMENT --	APPROVAL [illegible]		
Final Finish --	APPROVAL		
NEXT ASSY USED ON	NASA APPROVAL [illegible]	CODE IDENT NO 80230 SIZE E NASA DRAWING NO 1008179	
APPLICATION	MIT APPROVAL [illegible]	SCALE 1/1 WT SHEET 3 OF 3	

1008179 F

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

SECTION D-D

.005 MAX ALLOWABLE STEP ABOVE SURFACE -D-
STEP BELOW SURFACE NOT PERMITTED

.015 R MAX PERMISSIBLE
GAGE POINT
CUTTER RADIUS
.094 R MAX PERMISSIBLE
.125 MAX.
-B-
⊥ C .004
.0003 MAX. STEP BELOW ADJACENT SURFACE PERMISSIBLE FOR SHADED AREA
STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

VIEW A
SCALE 2/1

SECTION H-H
SCALE 2/1

.072 .073 DIA 45 PLACES
⌖ .004 DIA
8 EQUAL SPACES AT .125 ±.002 PITCH
TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
4 EQUAL SPACES AT .125 ±.002 PITCH TOTAL .500 ±.002 TOLERANCE NON-CUMULATIVE
CUTOUT THRU
9 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.800 ±.002 TOLERANCE NON-CUMULATIVE
.094 R
4-40 UNC-3B TAP AFTER ANODIZING
.040 .060 x 45° ±5° 2 PLACES BLEND WITH .12 R
5 EQUAL SPACES AT .200 ±.002 PITCH TOTAL 1.000 ±.002 TOLERANCE NON-CUMULATIVE
.137 .136 DIA 60 PLACES
⌖ .004 DIA

SECTION F-F

.005 SEE VIEW A
.487 .491 (FROM GAGE POINT)
.16 R 2 PLACES
.12 3 PLACES
.006 R MAX PERMISSIBLE
.005 MAX ALLOWABLE STEP ABOVE SURFACE -E-
STEP BELOW SURFACE NOT PERMITTED

.030 R MAX PERMISSIBLE ONE PLACE ONLY
CUTOUT THRU
.125 DIA x .19 DEEP 2 PLACES FOR MACHINING LOCATION
.062 x 45° TYP
DIMENSION FOR STEP ONLY

PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS PER ND1002019 LOCATE CENTRALLY

CUTOUT THRU
.140 DIA
.500 DIA SPOTFACE
.240
2 HOLES

PARTIAL SECTION G-G
SCALE : 2:1

.729 REF
16.7195 16.7165 (FROM GAGE POINT)
17.488 17.468

SECTION E-E

.015 R MAX PERMISSIBLE

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A
3. REMOVE BURRS AND BREAK SHARP EDGES .005-.015
4. UNLESS OTHERWISE SPECIFIED, FINISH 125
5. ALL RADII AND FILLETS TO BE $^{.14}_{.10}$ UNLESS OTHERWISE SPECIFIED
6. FINISH ELECTROLESS NICKEL PLATE ALL OVER PER ND1002198. DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUB THREADED INSERT HOLES DURING PLATING
8. COAT FIND NO.1& FIND NO. 2 WITH MIL-P-8585 WET ZI C CHROMATE PRIMER.

SECTION A-A
2 PLACES
.186 .190 DIA CSK 100° X .230 .210
.220 .226
5° 0' ±0°15'

SECTION B-B
2 PLACES
.248
2
.165 .169 DIA THRU
10-32UNF-2B THRU
82° ±1° CSK, .189 .199 DIA
⌖ .005 DIA
SEE NOTES 6 & 8

SECTION C-C
.272 DIA
C'BORE .406 DIA X .142 DEEP
.281
.250 .246
.245
5°
.015 R MAX PERMISSIBLE

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	1000115-2	INSERT, THREADED, SELF-LOCKING	2
1.	1008179-1	FRAME, TRAY	1

LIST OF MATERIALS

1007149	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES
XX ±.02 XXX ±.005 0° 30'
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINAL FINISH SEE NOTE 6

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE 12/26/62
CHECKED —
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible] 1/15/63
QUAL APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

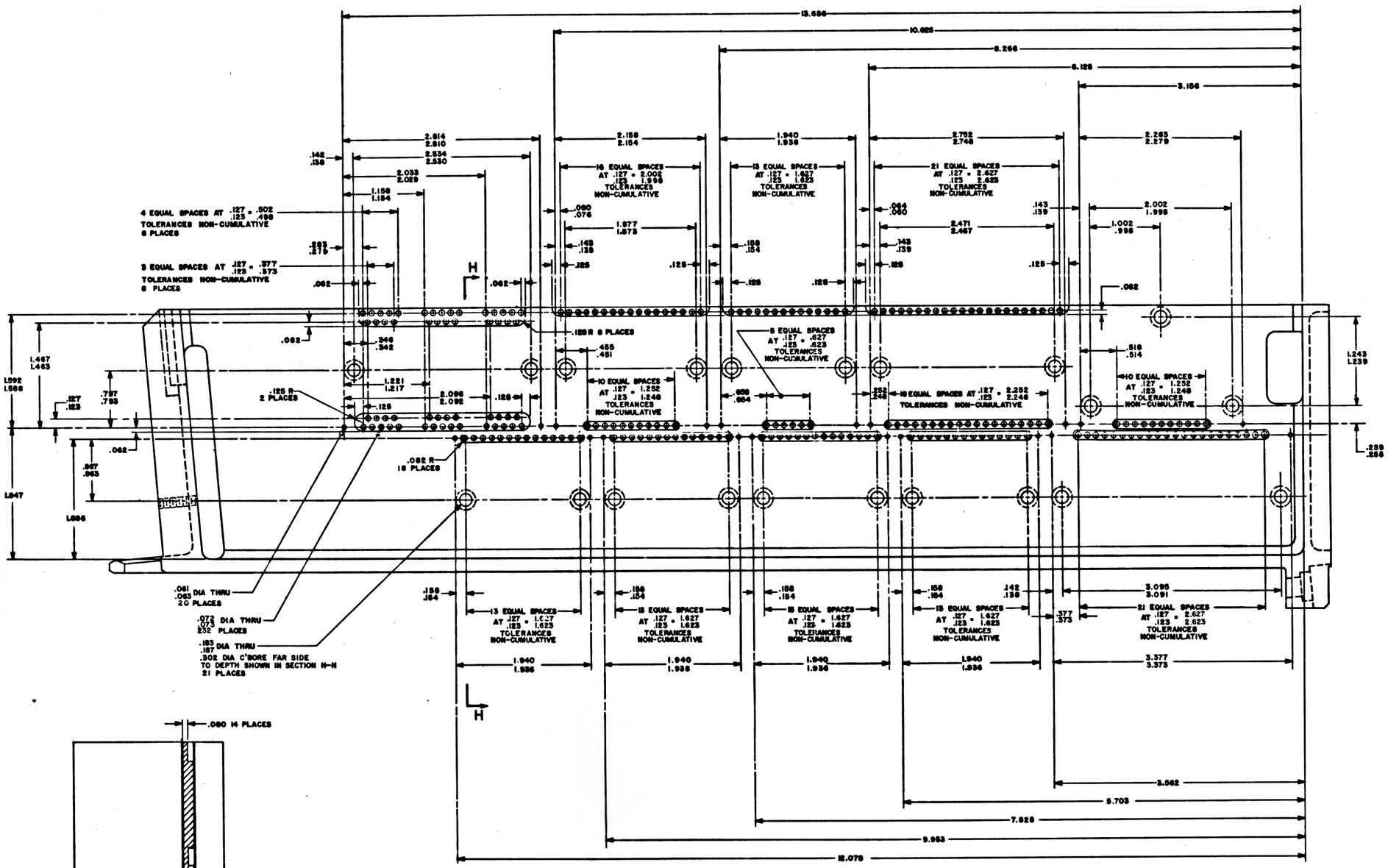
FRAME, TRAY 9

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1008179
SCALE 1/1 | WT | SHEET 1 OF 2

INCHES
PHOTOGRAPHIC SCALE ONLY

MASTER

6278001



MASTER

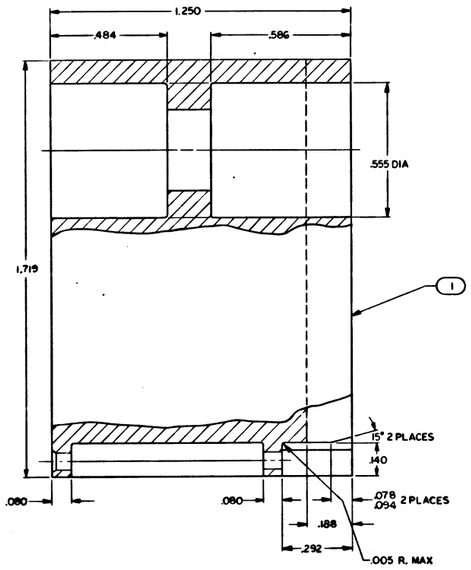
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

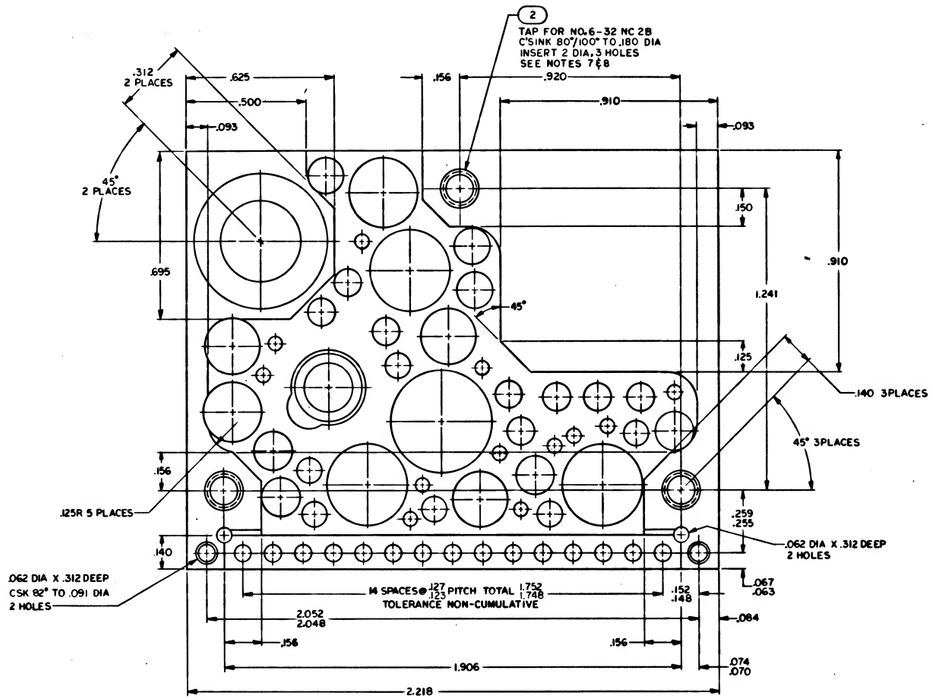
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± XXX .005 ±30' XXXX .0005 DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINISH FINISH	M I T INSTRUMENTATION LAB Cambridge, Mass. MANNED SPACECRAFT CENTER HOUSTON, TEXAS
1007149			DRAWING DATE 10/1/63 CHECKED APPROVAL APPROVAL 10/2/63 NASA APPROVAL 10/17/63 MIT APPROVAL
NEXT ASSY	USED ON		FRAME, TRAY 9
APPLICATION			CODE IDENT NO. SIZE E NASA DRAWING NO 1008179 SCALE 2:1 WT SHEET 2 OF 2

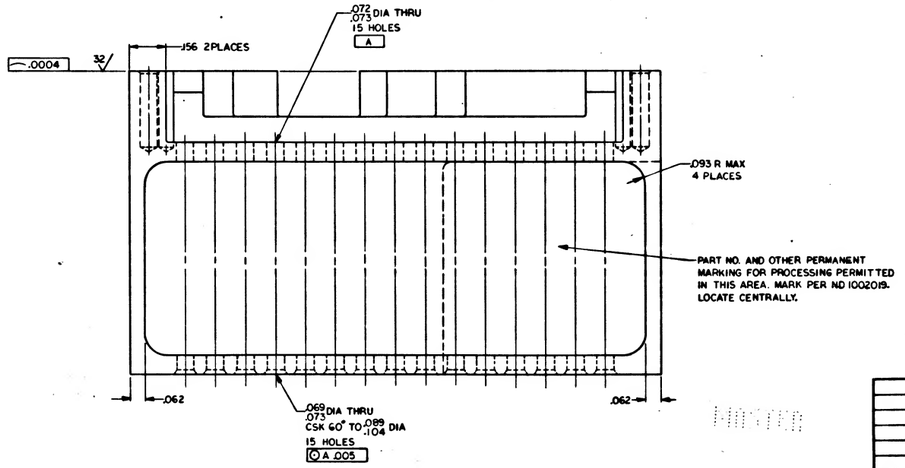
1008179

INCHES
0
PHOTOGRAPHIC SCALE ONLY

REVISIONS			
QTY	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 1685	3/16/67	







QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
3	MS21209-C0620	INSERT, SCREW LOCKING	2
1	1008180-1	HEATSINK	1

LIST OF MATERIALS

1007125	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX± .02 XXX± .005 ANGLES ±°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3

MIT INSTRUMENTATION LAB
DRAWN Z. Kaufman 8/1/66
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL 8/16/67

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HEATSINK POWER SUPPLIES, SIGNAL CONDITIONER

CODE IDENT NO. J | SIZE | NASA DRAWING NO. 1008180
SCALE 5:1 | WT | SHEET 1 OF 1

1008180

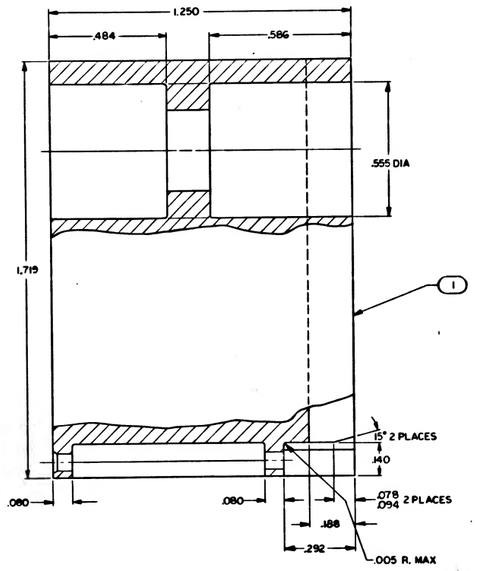
1008180 SHT 1

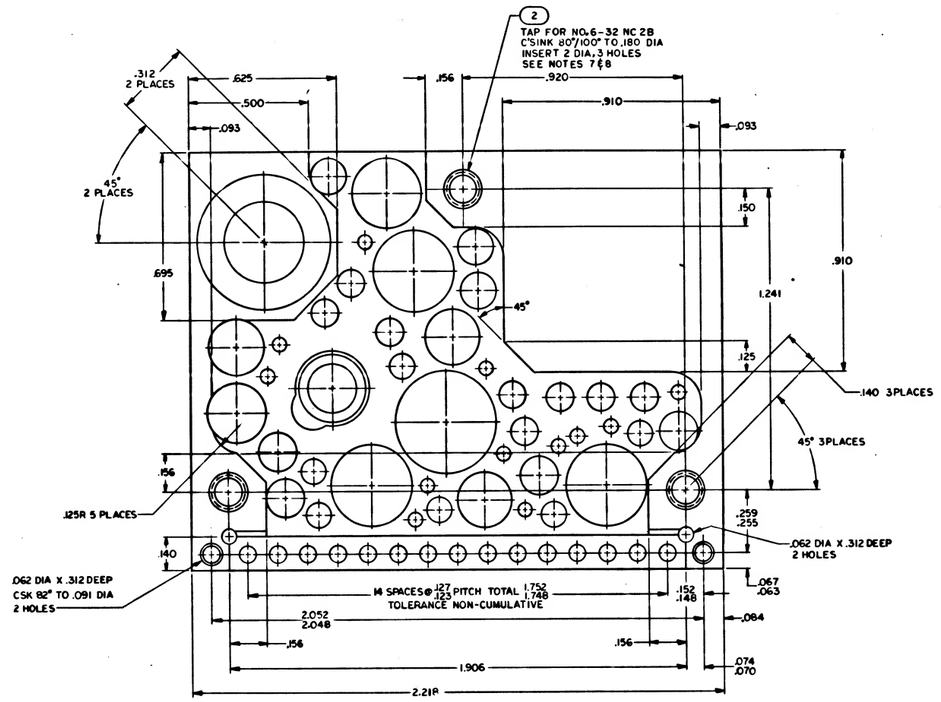
F3

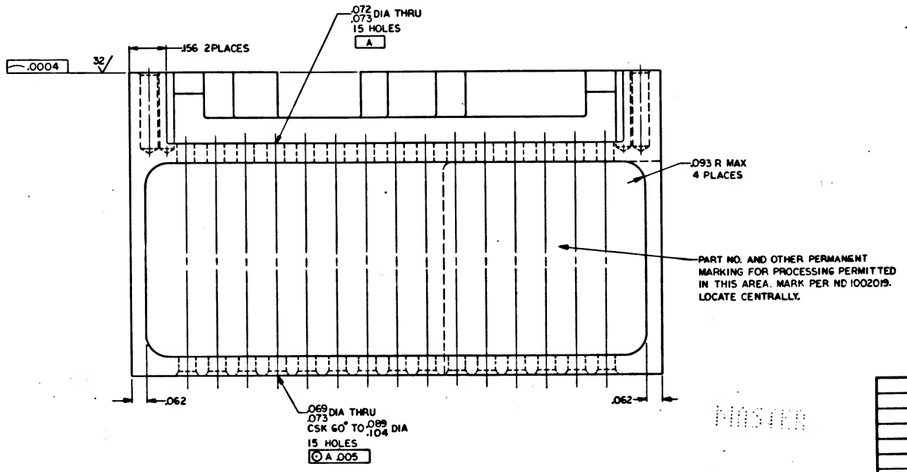
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 1485		

SEE DETAIL A

X







QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
3	MS21209-C0620	INSERT, SCREW LOCKING	2
1	1008180-1	HEATSINK	1
		LIST OF MATERIALS	

1007125	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ANGLES ±1°
.X ± XX ± .02
.XXX ± .005
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINISH
SEE NOTE 3

MIT INSTRUMENTATION LAB
DRAWN L Kraus DATE
CHECKED
APPROVED
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HEATSINK POWER SUPPLIES, SIGNAL CONDITIONER

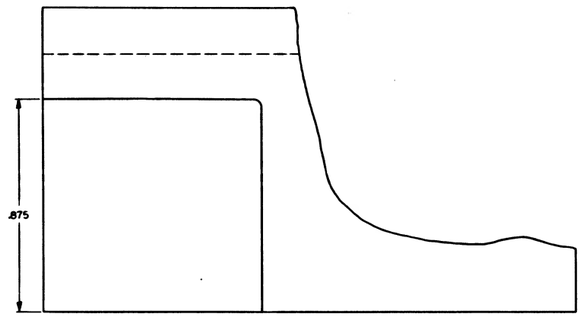
CODE IDENT NO. | SIZE J | NASA DRAWING NO. 1008180
SCALE 5:1 | WT | SHEET 1 OF 1

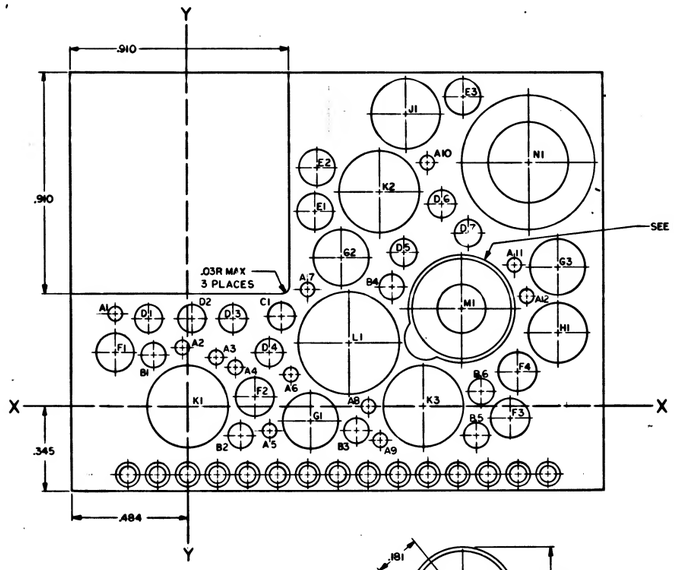
1008180 SHT

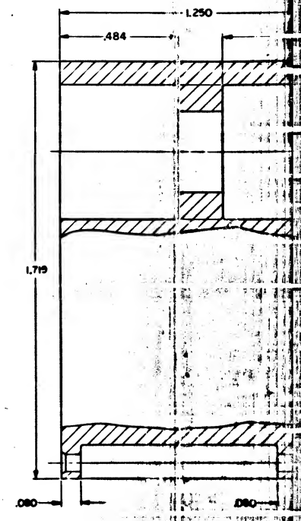
1008180

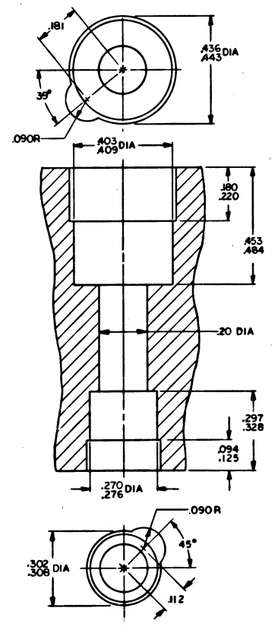
MASTER

HOLE IDENT	X DIM.	Y DIM.	HOLE DIA	QTY
A1	-.300	.380	.058 .062	12
A2	-.020	.240		
A3	.120	.200		
A4	.200	.160		
A5	.340	-.100		
A6	.430	.130		
A7	.500	.480		
A8	.750	.000		
A9	.800	-.140		
A10	1.000	1.000		
A11	1.360	.580		
A12	1.410	.450		
B1	-.140	.210	.100 .104	6
B2	.220	-.120		
B3	.700	-.100		
B4	.850	.490		
B5	1.200	-.120		
B6	1.220	.060		
C1	.390	.370	.112 .116	1
D1	-.160	.360	.127 .131	7
D2	.020	.360		
D3	.190	.360		
D4	.340	.220		
D5	.900	.630		
D6	1.060	.830		
D7	1.170	.710		
E1	.530	.800	.146 .150	3
E2	.540	.980		
E3	1.150	1.270		
F1	-.300	.220	.156 .160	4
F2	.280	.040		
F3	1.340	-.050		
F4	1.370	.140		
G1	.510	-.060	.227 .231	3
G2	.640	.610		
G3	1.540	.570		
H1	1.540	.300	.241 .245	1
J1	.910	1.200	.281 .288	1
K1	.000	.000	.330 .337	3
K2	.800	.880		
K3	.980	.000		
L1	.670	.260	.416 .423	1
M1	1.140	.400	SEE DETAIL A	1
N1	1.420	1.000	.332	1







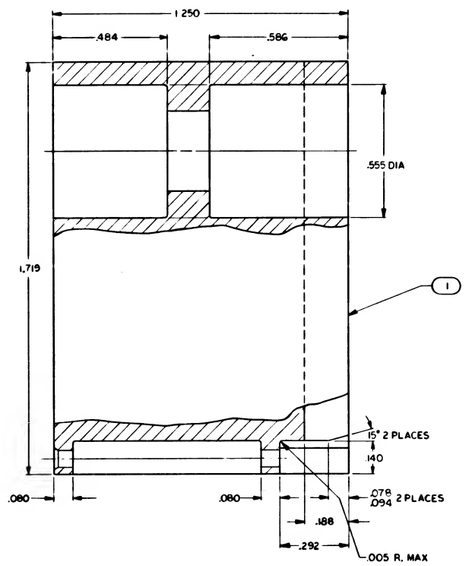


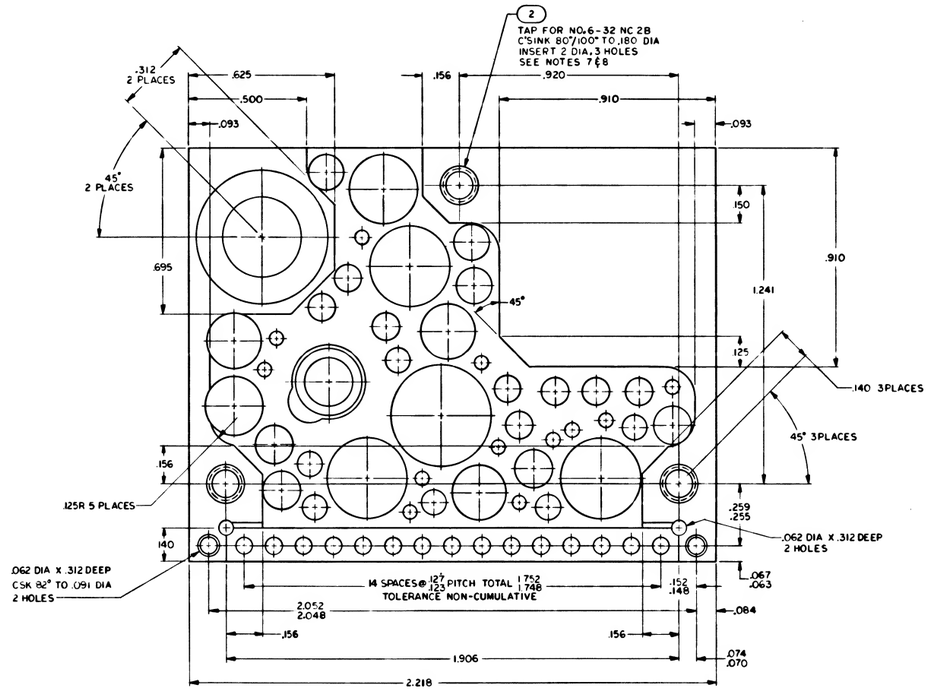
DETAIL A

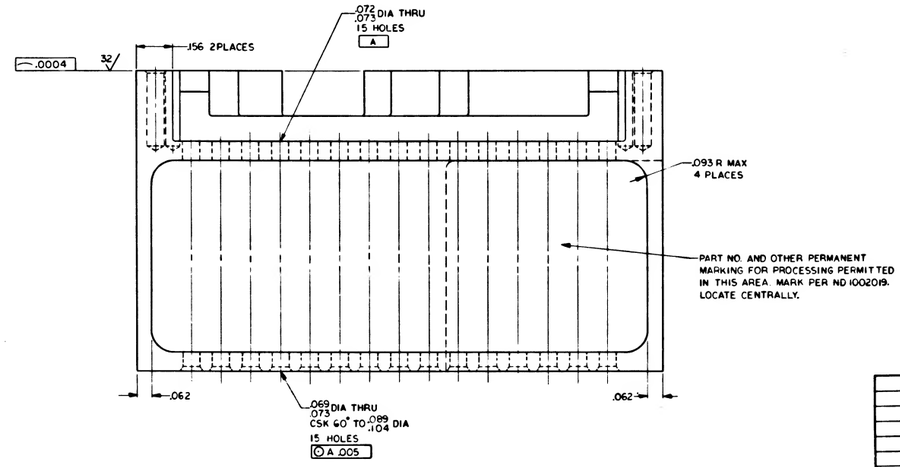
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: PLUG INSERT HOLES AND ANODIZE PER MIL-M-3171 TYPE IV
4. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .010 MAX
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005 -.015
7. COAT THREADS AND FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
8. INSTALL FIND NO.2 PER MS35646, BREAK OFF DRIVING TANG
9. THE DRILLING OF ANY COMPONENT HOLE CAUSING VISIBLE DEFORMATION IN AN ADJACENT HOLE OR ON AN EXTERNAL SURFACE OR ACTUAL BREAKOUT OF THE HOLE INTO ANOTHER HOLE OR EXTERNAL SURFACE SHALL BE CAUSE FOR REJECTION OF THIS PART

1008180 SHT

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 14546		
B	REVISED PER TDRR 5354		







QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
3	MS21209-C0620	INSERT, SCREW LOCKING	2
1	1008180-1	HEATSINK	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX: .02 XXX: .005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
HEAT TREATMENT:
FINAL FINISH: SEE NOTE 3
NEXT ASSY | USED ON
1007125
APPLICATION

M.I.T. INSTRUMENTATION LAB, Cambridge, Mass.
DRAWN: L. Kraker 4/1/68
CHECKED: R. Young
APPROVAL: W. Trunbull
APPROVAL: A. L. Hoag 6 MAR 68
NASA APPROVAL: W. J. Thaler
MIT APPROVAL: W. W. Wilkins

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

HEATSINK POWER SUPPLIES, SIGNAL CONDITIONER

CODE IDENT NO 80230 | SIZE J | NASA DRAWING NO 1008180
SCALE 5:1 | WT | SHEET 1 OF 1

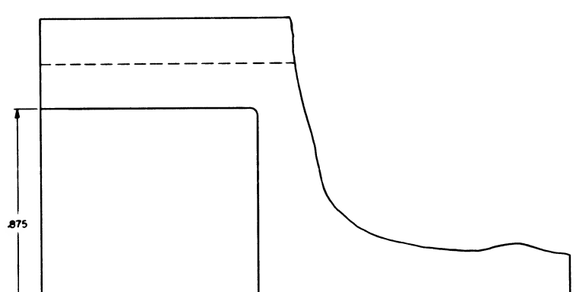
1008180 B

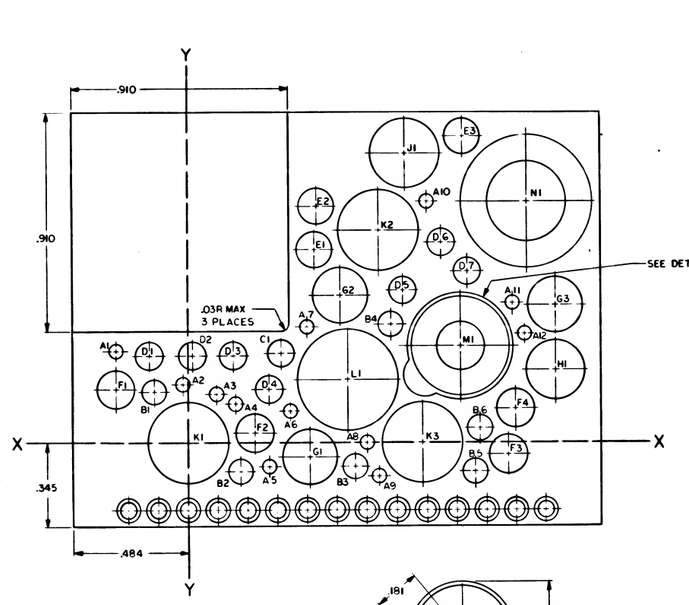
A

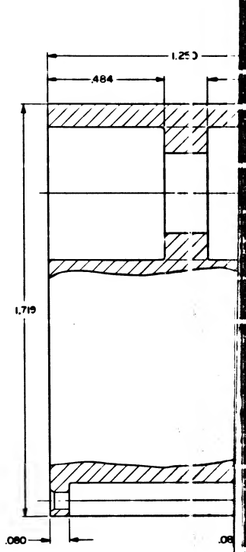
1008180C REV -2 SHT 3

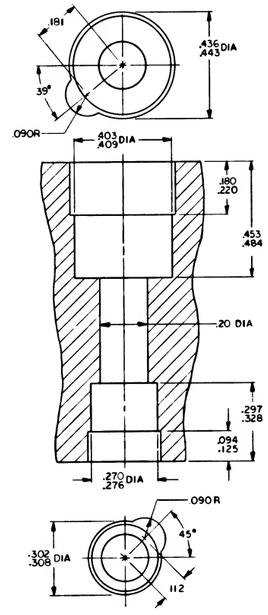
2/1008180

HOLE IDENT	X DIM.	Y DIM.	HOLE DIA	QTY
A1	-.300	.380	.058 .062	12
A2	-.020	.240		
A3	.120	.200		
A4	.200	.160		
A5	.340	-.100		
A6	.430	.130		
A7	.500	.480		
A8	.750	.000		
A9	.800	-.140		
A10	1.000	1.000		
A11	1.360	.580		
A12	1.410	.450		
B1	-.140	.210	.100 .104	6
B2	.220	-.120		
B3	.700	-.100		
B4	.850	.490		
B5	1.200	-.120		
B6	1.220	.060		
C1	.390	.370	.112 .116	1
D1	-.160	.360	.127 .131	7
D2	.020	.360		
D3	.190	.360		
D4	.340	.220		
D5	.900	.630		
D6	1.060	.830		
D7	1.170	.710		
E1	.530	.800	.146 .150	3
E2	.540	.980		
E3	1.150	1.270		
F1	-.300	.220	.156 .160	4
F2	.280	.040		
F3	1.340	-.050		
F4	1.370	.140		
G1	.510	-.060	.227 .231	3
G2	.640	.610		
G3	1.540	.570		
H1	1.540	.300	.241 .245	1
J1	.910	1.200	.281 .288	1
K1	.000	.000	.330 .337	3
K2	.800	.880		
K3	.980	.000		
L1	.670	.260	.416 .423	1
M1	1.140	.400	SEE DETAIL A	1
N1	1.420	1.000	.332	1







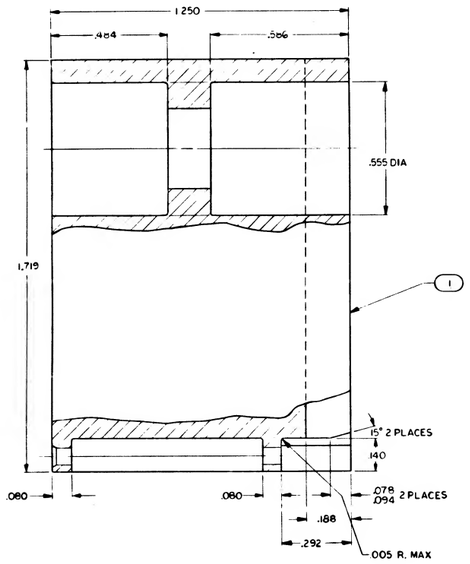


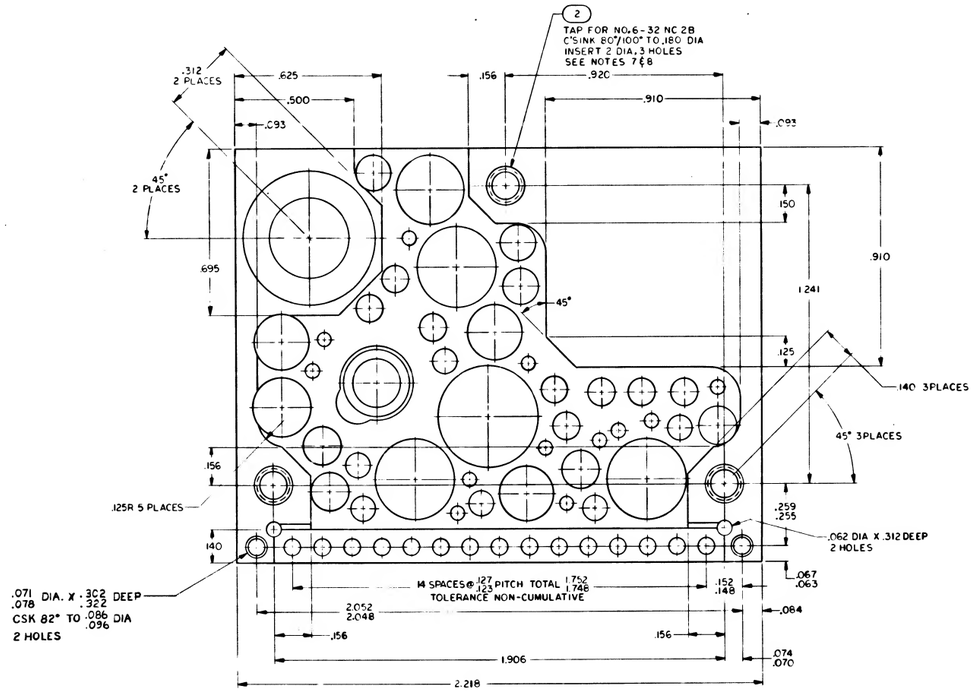
DETAIL A

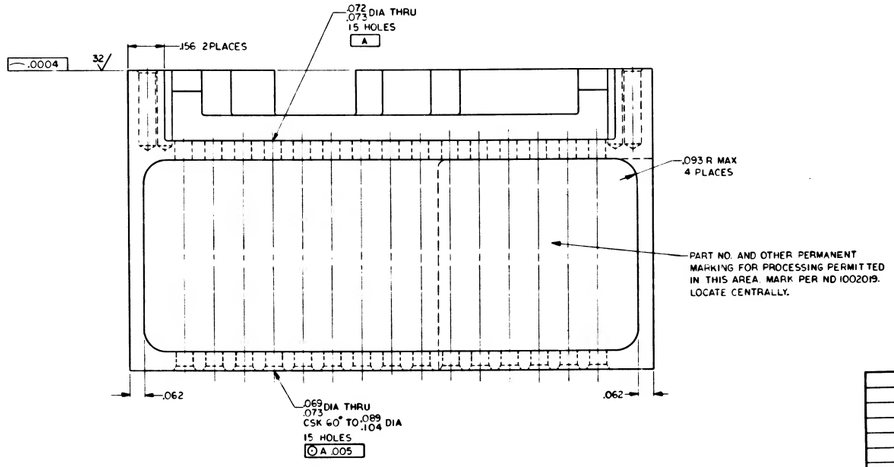
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: PLUG INSERT HOLES AND ANODIZE PER MIL-M-45202 TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .010 MAX
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005-.015
7. COAT THREADS AND FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
8. INSTALL FIND NO.2 PER MS35646, BREAK OFF DRIVING TANG
9. THE DRILLING OF ANY COMPONENT HOLE CAUSING VISIBLE DEFORMATION IN AN ADJACENT HOLE OR ON AN EXTERNAL SURFACE OR ACTUAL BREAKOUT OF THE HOLE INTO ANOTHER HOLE OR EXTERNAL SURFACE SHALL BE CAUSE FOR REJECTION OF THIS PART
10. APPLY A .31 MIN WIDTH PERIMETER OF ADHESIVE PER ND1002187 TYPE II TO THE SURFACE WITH COMPONENT HOLES WHICH IS 1.25 FROM THE HELICOIL MOUNTING SURFACE. COAT THE ENTIRE SURFACE WITH COMPONENT HOLES, WHICH IS .188 FROM THE HELICOIL MOUNTING SURFACE.

1008180	REV LTR B	SHT

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR [illegible]	[illegible]	
B	REVISED PER TDRR 8354	3-12-68	[illegible]
C	REVISED PER TDRR 2031	[illegible]	[illegible]







QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FIND NO
3	MS21209-C0620	INSERT, SCREW LOCKING	2
1	1008180-1	HEATSINK	1

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ± .02 XXX ± .005 ANGLES ± 1° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass.
MATERIAL SEE NOTE 2	DRAWN L. Krahn 22 MAR 68
HEAT TREATMENT	CHECKED
FINAL FINISH SEE NOTE 3	APPROVAL
NEXT ASSY 1007125 USED ON APPLICATION	APPROVAL
	NASA APPROVAL
	MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

HEATSINK
POWER SUPPLIES,
SIGNAL CONDITIONER

CODE IDENT NO	SIZE	NASA DRAWING NO
80230	J	1008180

SCALE 5:1 WT SHEET 1 OF 1

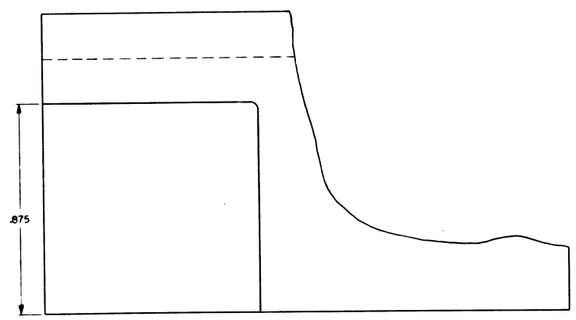
1008180 C

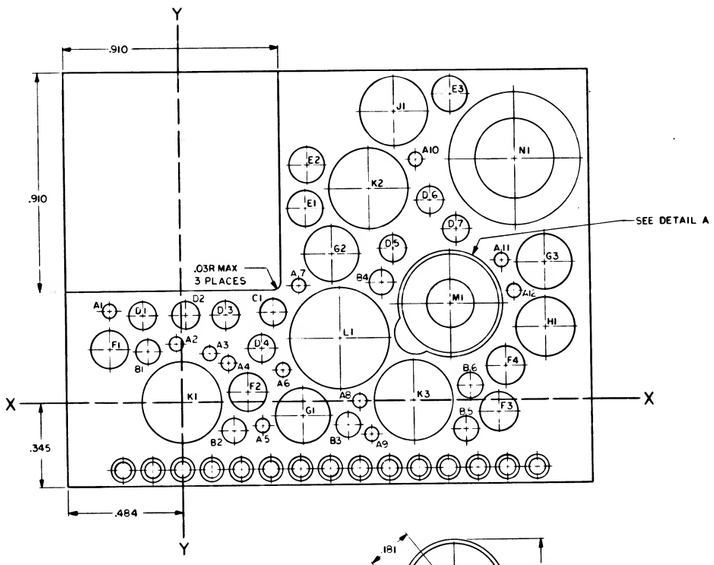
1008180 C SHT

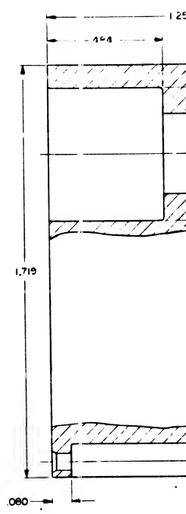
R/L 1008180

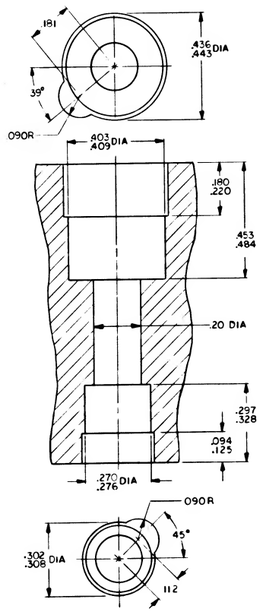
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT INCURS NO RESPONSIBILITY OR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

HOLE IDENT	X DIM.	Y DIM.	HOLE DIA	QTY
A1	-.300	.380	.058 .062	12
A2	-.020	.240		
A3	.120	.200		
A4	.200	.160		
A5	.340	-.100		
A6	.430	.130		
A7	.500	.480		
A8	.750	.000		
A9	.820	-.140		
A10	1.000	1.000		
A11	1.360	.580		
A12	1.410	.450		
B1	-.140	.210	.100 .104	6
B2	.220	-.120		
B3	.700	-.100		
B4	.650	.490		
B5	1.200	-.120		
B6	1.220	.060		
C1	.390	.370	.112 .116	1
D1	-.160	.360	.127 .131	7
D2	.020	.360		
D3	.190	.360		
D4	.340	.220		
D5	.900	.630		
D6	1.060	.830		
D7	1.170	.710		
E1	.530	.800	.146 .150	3
E2	.540	.990		
E3	1.150	1.270		
F1	-.300	.220	.156 .160	4
F2	.280	.040		
F3	1.340	-.050		
F4	1.370	.140		
G1	.510	-.060	.227 .231	3
G2	.640	.610		
G3	1.540	.570		
H1	1.540	.300	.241 .245	1
J1	.910	1.200	.281 .288	1
K1	.000	.000	.330 .337	3
K2	.800	.880		
K3	.980	.000		
L1	.670	.260	.416 .423	1
M1	1.140	.400	SEE DETAIL A	1
N1	1.420	1.000	.332	1









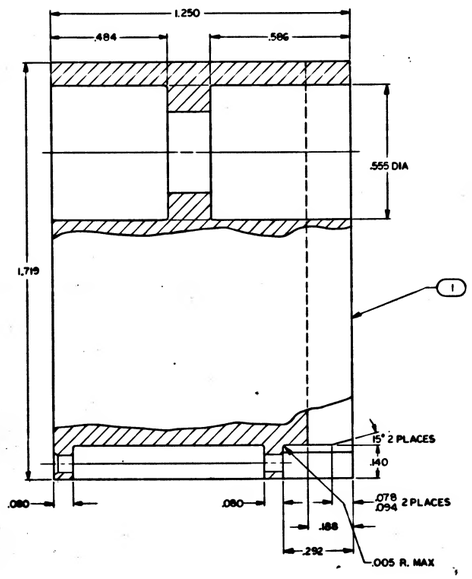
DETAIL A

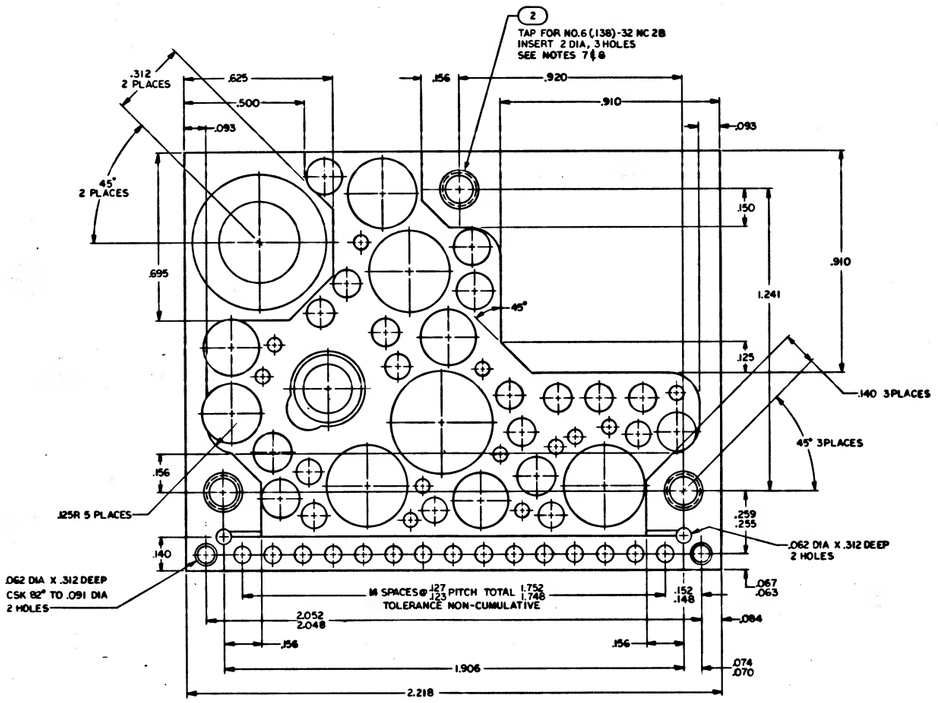
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: PLUG INSERT HOLES AND ANODIZE PER MIL-M-45202 TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED 125 $\sqrt{}$ ALL OVER
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .010 MAX
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005-.015
7. COAT THREADS AND FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
8. INSTALL FIND NO. 2 PER MS 35646, BREAK OFF DRIVING TANG
9. THE DRILLING OF ANY COMPONENT HOLE CAUSING VISIBLE DEFORMATION IN AN ADJACENT HOLE OR ON AN EXTERNAL SURFACE OR ACTUAL BREAKOUT OF THE HOLE INTO ANOTHER HOLE OR EXTERNAL SURFACE SHALL BE CAUSE FOR REJECTION OF THIS PART
10. APPLY A .31 MIN WIDTH PERIMETER OF ADHESIVE PER ND 1002187 TYPE II TO THE SURFACE WITH COMPONENT HOLES WHICH IS 1.25 FROM THE HELICOIL MOUNTING SURFACE. COAT THE ENTIRE SURFACE WITH COMPONENT HOLES, WHICH IS .188 FROM THE HELICOIL MOUNTING SURFACE.

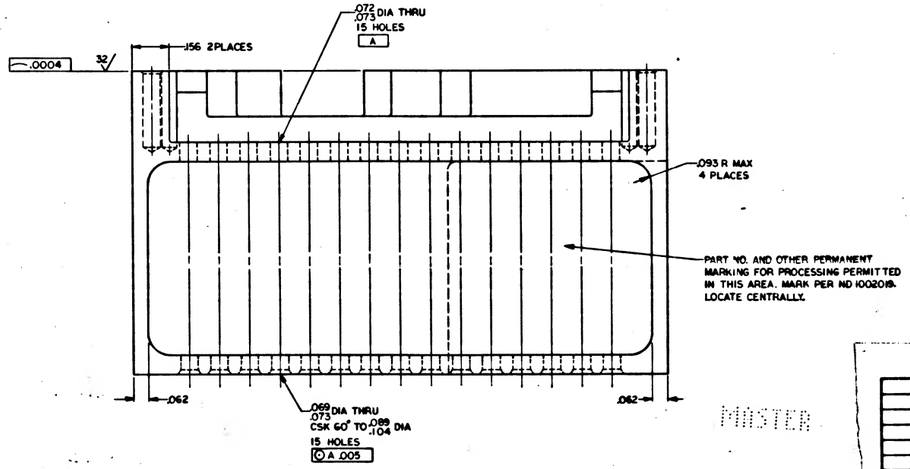
3H

1008180	REV LTR C	SHT

1008180







MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
3	MS21209-C0620	INSERT, SCREW LOCKING	2
1	1008180-1	HEATSINK	1

LIST OF MATERIALS

NEXT ASSY	USED ON		
1007125			

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ± .02 ANGLES ±1°
.XXX ± .005
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINISH
SEE NOTE 3

ITT INSTRUMENTATION LABS Commercial Works
DRAWN J. Meadows 2/11/70
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
QUALITY APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

HEATSINK
POWER SUPPLIES,
SIGNAL CONDITIONER

CODE IDENT NO. J
SIZE
NASA DRAWING NO. 1008180
SCALE 5:1
WT
SHEET 1 OF 1

1008180

A

2

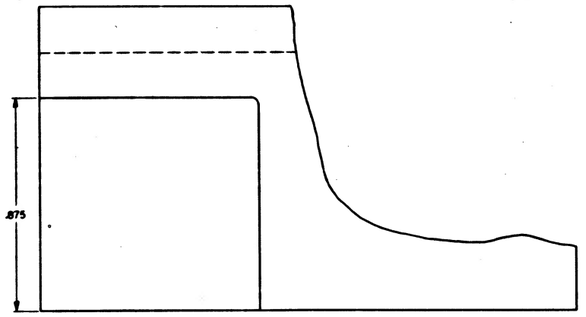
D

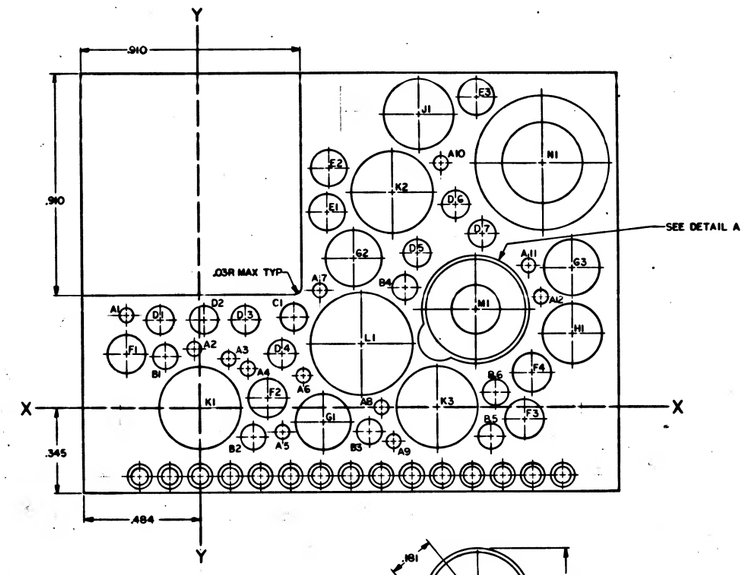
C

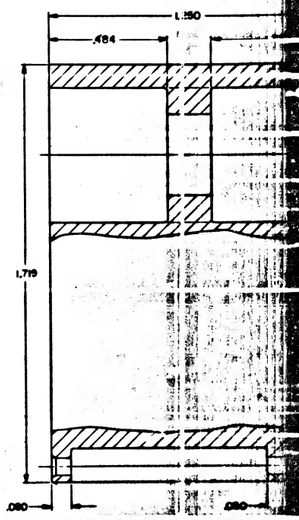
SHT

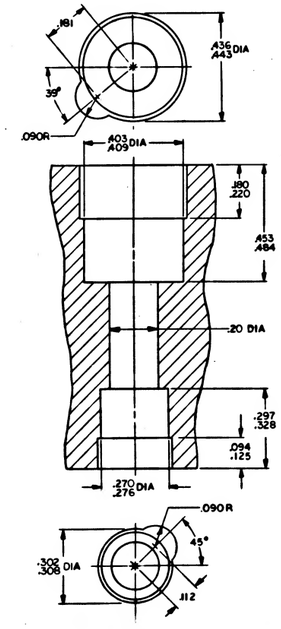
INCHES

HOLE IDENT	X DIM.	Y DIM.	HOLE DIA	QTY
A1	-.300	.380	.058 .062	12
A2	-.020	.240		
A3	.120	.200		
A4	.200	.160		
A5	.340	-.100		
A6	.430	.130		
A7	.500	.480		
A8	.750	.000		
A9	.800	-.140		
A10	1.000	1.000		
A11	1.360	.580		
A12	1.410	.450		
B1	-.140	.210	.100 .104	6
B2	.220	-.120		
B3	.700	-.100		
B4	.850	.490		
B5	1.200	-.120		
B6	1.220	.060		
C1	.390	.370	.112 .116	1
D1	-.160	.360	.127 .131	7
D2	.020	.360		
D3	.190	.360		
D4	.340	.330		
D5	.900	.630		
D6	1.060	.830		
D7	1.170	.710		
E1	.530	.800	.146 .150	3
E2	.540	.980		
E3	1.150	1.270		
F1	-.300	.220	.156 .160	4
F2	.280	.040		
F3	1.340	-.050		
F4	1.370	.140		
G1	.510	-.060	.227 .231	3
G2	.640	.610		
G3	1.540	.570		
H1	1.540	.300	.241 .245	1
J1	.910	1.200	.281 .288	1
K1	.000	.000	.330 .337	3
K2	.800	.880		
K3	.980	.000		
L1	.670	.260	.416 .423	1
M1	1.140	.400	SEE DETAIL A	1
N1	1.420	1.000	.332	1









DETAIL A

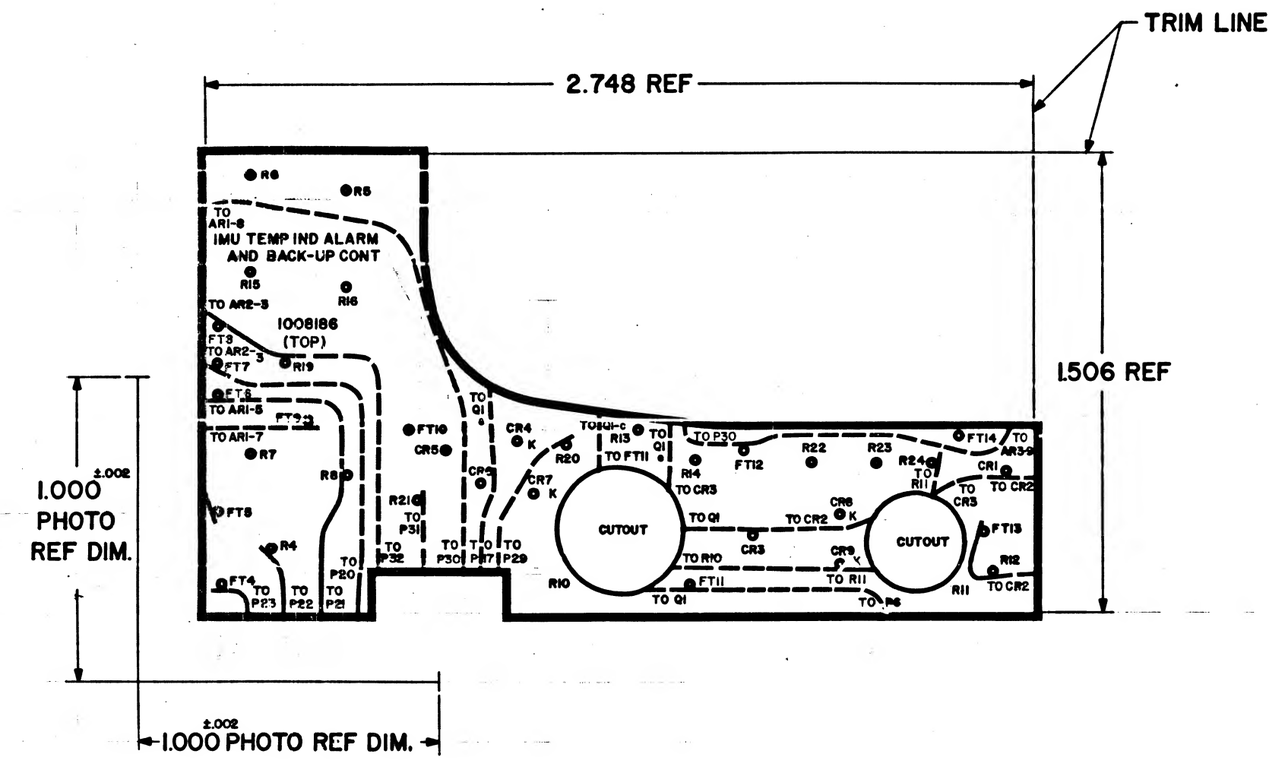
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: PLUG INSERT HOLES AND ANODIZE PER MIL-M-3171 TYPE IV
4. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
5. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .010 MAX
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005-.015
7. COAT THREADS AND FIND NO.2 WITH MIL-P-8585 WET ZINC CHROMATE PRIMER.
8. INSTALL FIND NO.2 PER MS35646, BREAK OFF DRIVING TANG
9. THE DRILLING OF ANY COMPONENT HOLE CAUSING VISIBLE DEFORMATION IN AN ADJACENT HOLE OR ON AN EXTERNAL SURFACE OR ACTUAL BREAKOUT OF THE HOLE INTO ANOTHER HOLE OR EXTERNAL SURFACE SHALL BE CAUSE FOR REJECTION OF THIS PART

1008180 SHT

NOTICE — WHEN GOVERNMENT DRAWING, SPECIFICATION, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWING, SPECIFICATION, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY BE INVOLVED.

REVISIONS 07297

SYM	DESCRIPTION	DATE	APPROVAL



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
5. MATERIAL: FILM .006/.008 THICK PER L-F-340, TYPE IB, CLASS 2, STYLE IA
6. ⊙ .045/.055 DIA PUNCH

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
		DO NOT SCALE THIS DRAWING
		MATERIAL SEE NOTE 5
1007162		HEAT TREATMENT
NEXT ASSY	USED ON	FINISH
APPLICATION		

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS. — MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

DRAWN DATE 2-27-68
CHECKED
APPROVAL
APPROVAL

INSULATOR TOP
PHOTOGRAPHIC MASTER
IMU TEMP INDICATOR ALARM AND BACKUP CONTROLLER

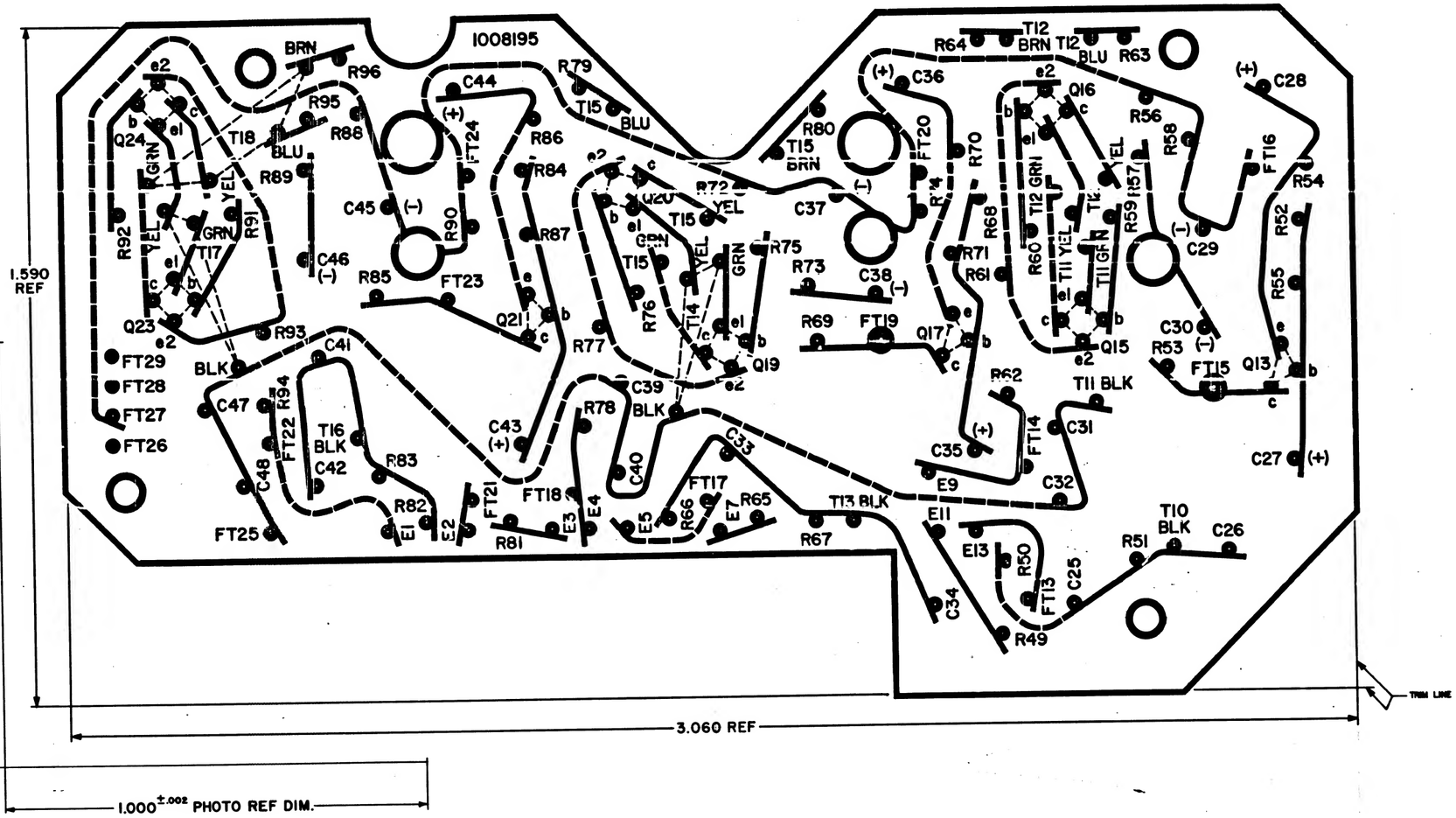
NASA APPROVAL
MIT APPROVAL

CODE IDENT NO.	SIZE	NASA DRAWING NO.
	D	1008186
SCALE 5/1	WT	SHEET 1 OF 1

INCHES 0 2
PHOTOGRAPHIC SCALE ONLY

1618001

1008195



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
4. CUT TO WITHIN .010 OF TRIM LINE

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

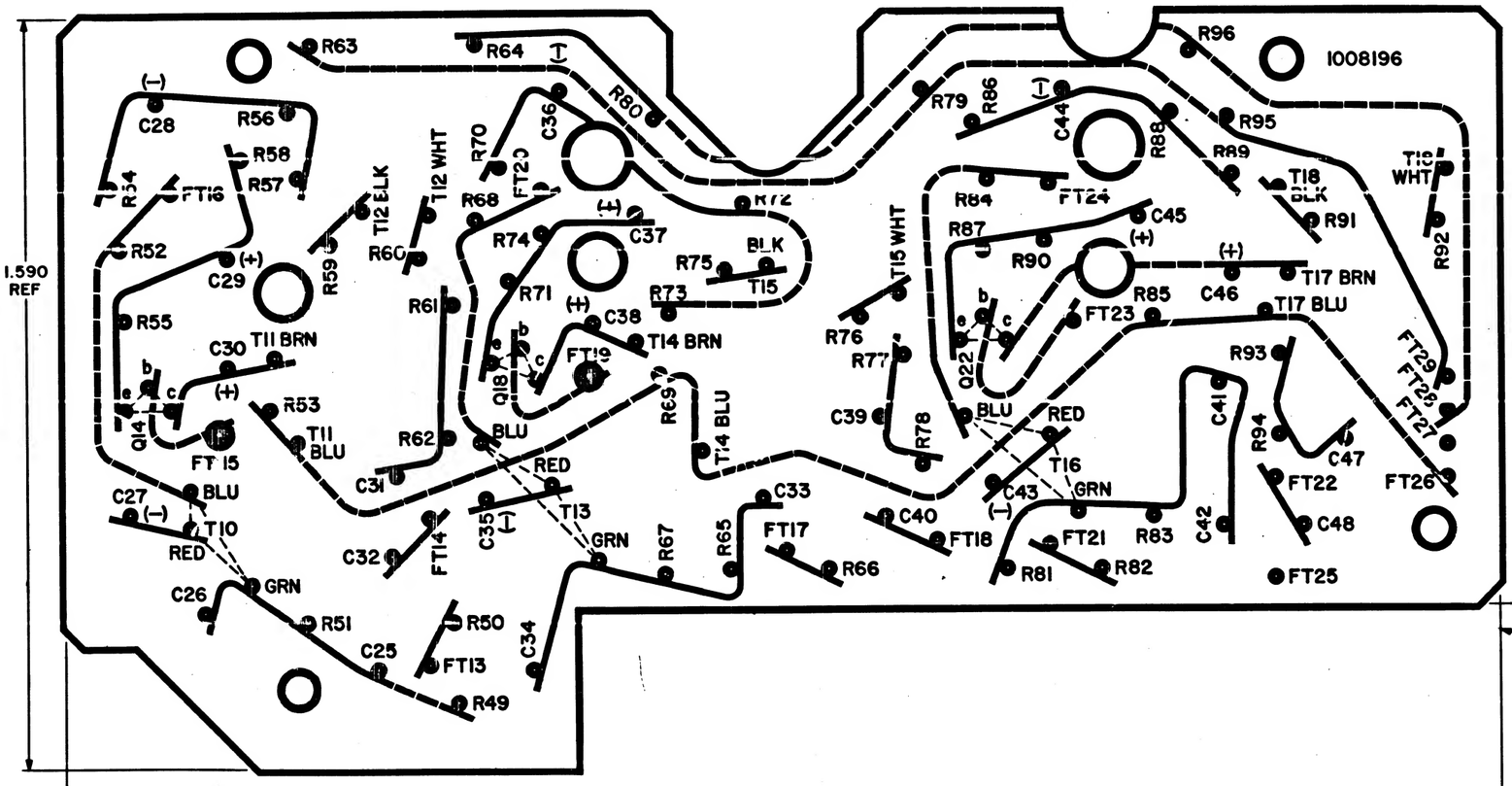
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN DATE 11APR
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD C SIGNAL CONDITIONER
GIMBAL RESOLVER

CODE IDENT NO. — | SIZE E | NASA DRAWING NO. 1008191
SCALE 10/1 | WT — | SHEET | OF



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
4. CUT TO WITHIN .010 OF TRIM LINE

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

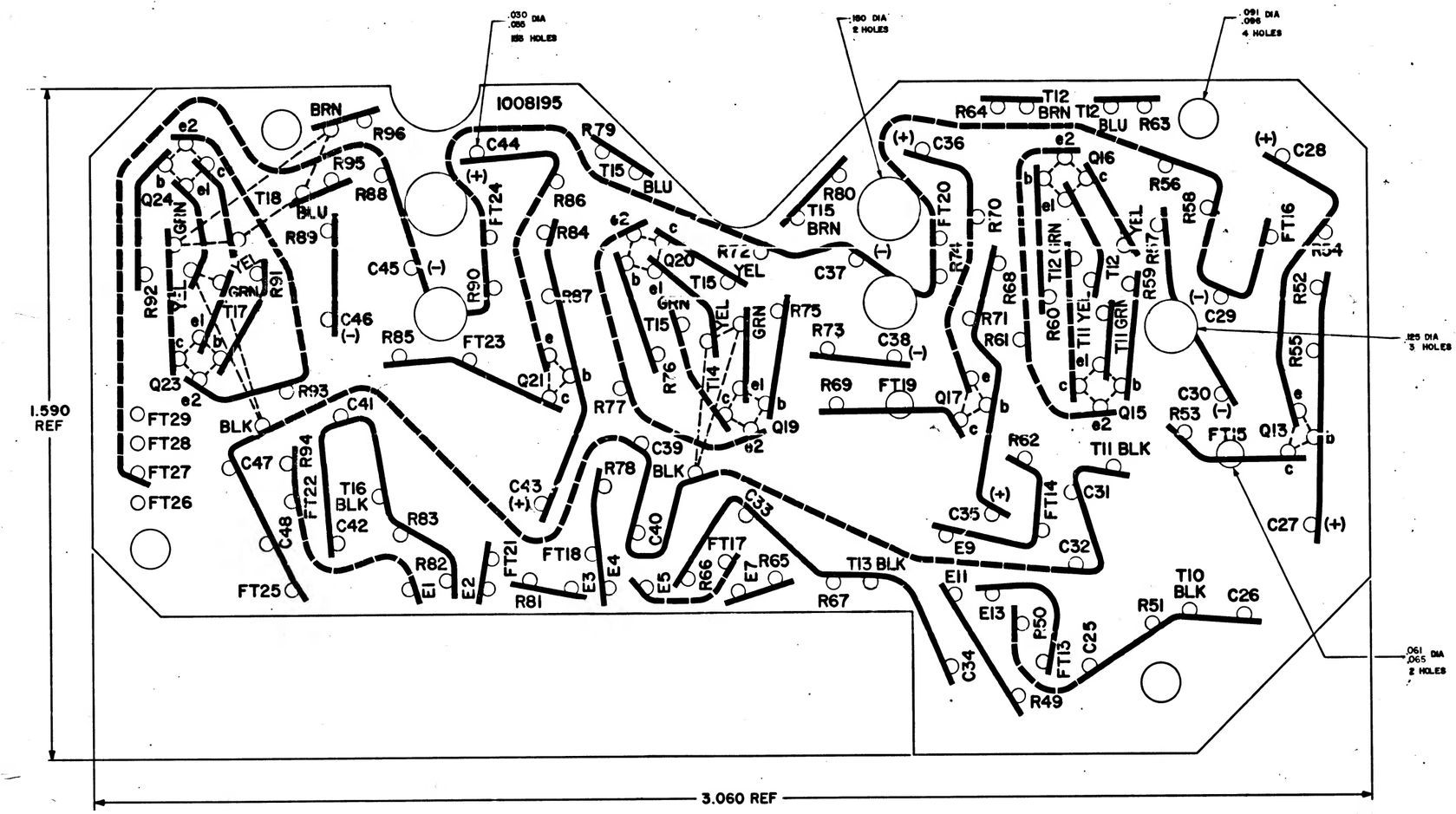
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINISH —
NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN E Kraly DATE 10 Feb 66
CHECKED
APPROVED
APPROVED
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD 9 SIGNAL CONDITIONER GIMBAL RESOLVER

CODE IDENT NO. — | SIZE E | NASA DRAWING NO. 1008192
SCALE 10/1 | WT — | SHEET 1 OF 1



REF:
DRAWING NO. 1008191 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK PLASTIC SHEET PER MIL-P-18177 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. MARK BLACK CHARACTERS PER ND 1002019

UNLESS OTHERWISE SPECIFIED	
TOLERANCES ON	
FRACTIONS ±1/64	DECIMALS ±.010
DO NOT SCALE THIS DRAWING	
MATERIAL	SEE NOTE 2
NEXT ASSY	USED ON
1007123	
APPLICATION	

QTY REQD	PART OR IDENTIFYING NO.	DESCRIPTION OR IDENTIFICATION
		LIST OF MATERIALS

NASA
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

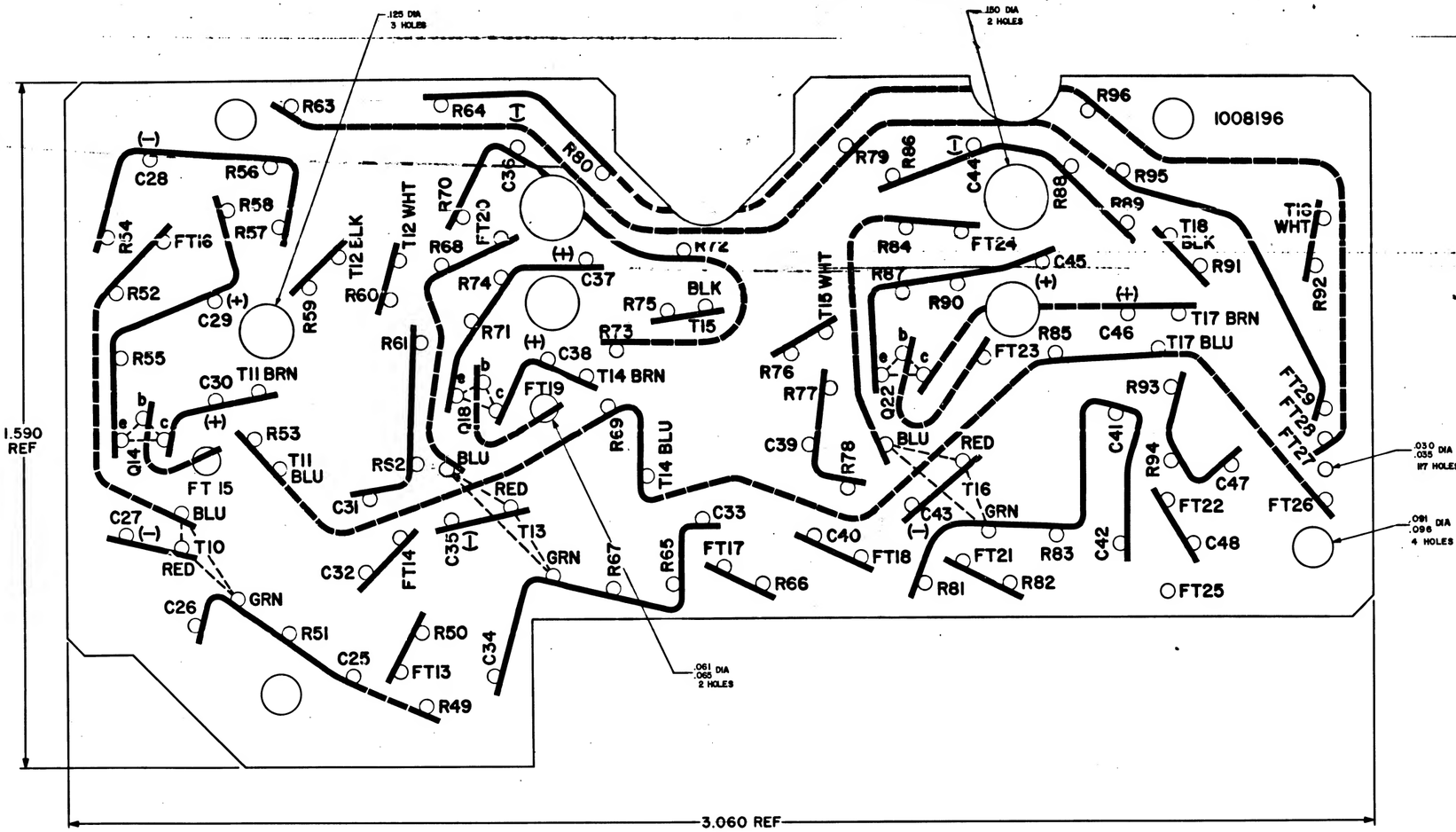
WIRING BOARD C
SIGNAL CONDITIONER
GIMBA. RESOLVER

DESIGN APPROVAL	SIZE	DRAWING NO.
	E	1008195

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
	9618001		

9618001



REF:
- DRAWING NO. 1008192 FOR PHOTOGRAPHIC MASTER

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK PLASTIC SHEET PER MIL-P-16177 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. MARK BLACK CHARACTERS PER ND 1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

1007125 — NEXT ASSY — USED ON — APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± .010 ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL: SEE NOTE 2
PAINT TREATMENT —
FINISH —

MIT INSTRUMENTATION LAB, Cambridge, Mass.
DES. — DRAWN — DATE 10 APR 65
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER, HOUSTON, TEXAS

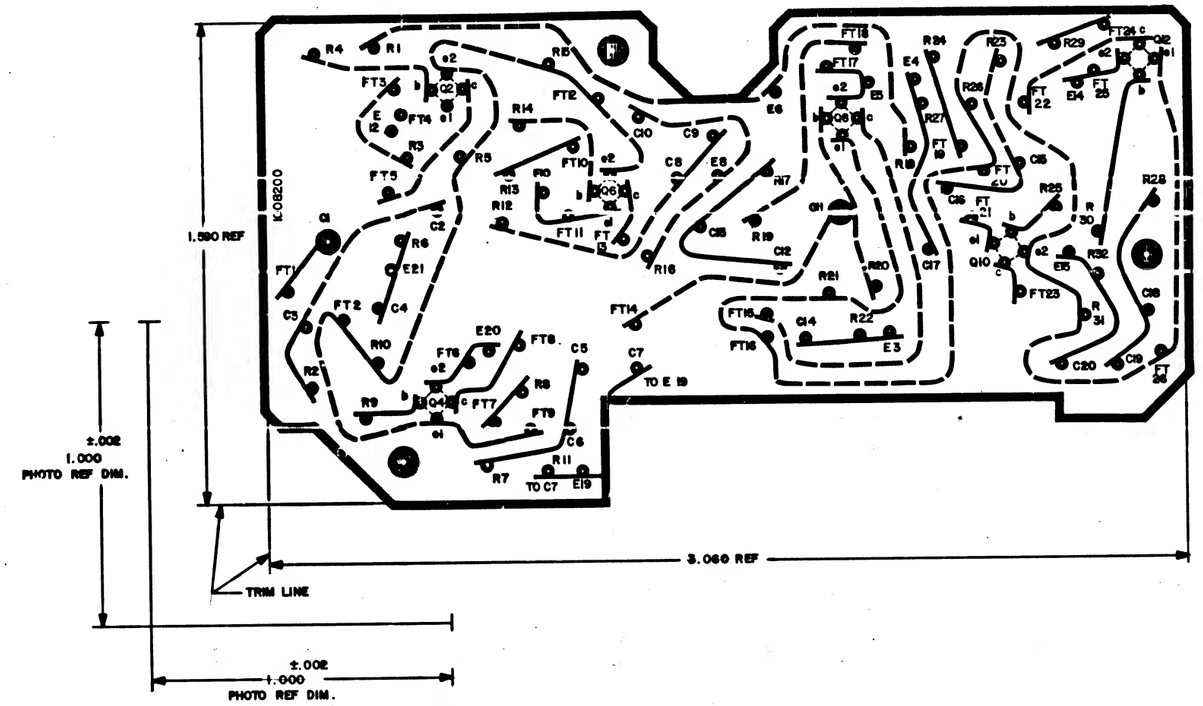
WIRING BOARD D
SIGNAL CONDITIONER
GIMBAL RESOLVER

CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008196
SCALE 10/1 — WT — SHEET 1 OF 1

1008196

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 11-69			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .001 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN

MASTER

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —— DECIMALS ± —— ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DRAWN [illegible] DATE 6-24-66
CHECKED [illegible] 7-26-66
APPROVAL [illegible] 7/26/66
APPROVAL [illegible] 7/26/66
NASA APPROVAL [illegible]
MIT APPROVAL [illegible] 7/26/66

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

PHOTOGRAPHIC MASTER
WIRING BOARD BOTTOM
SIGNAL CONDITIONER ASSEMBLY
OPTICS

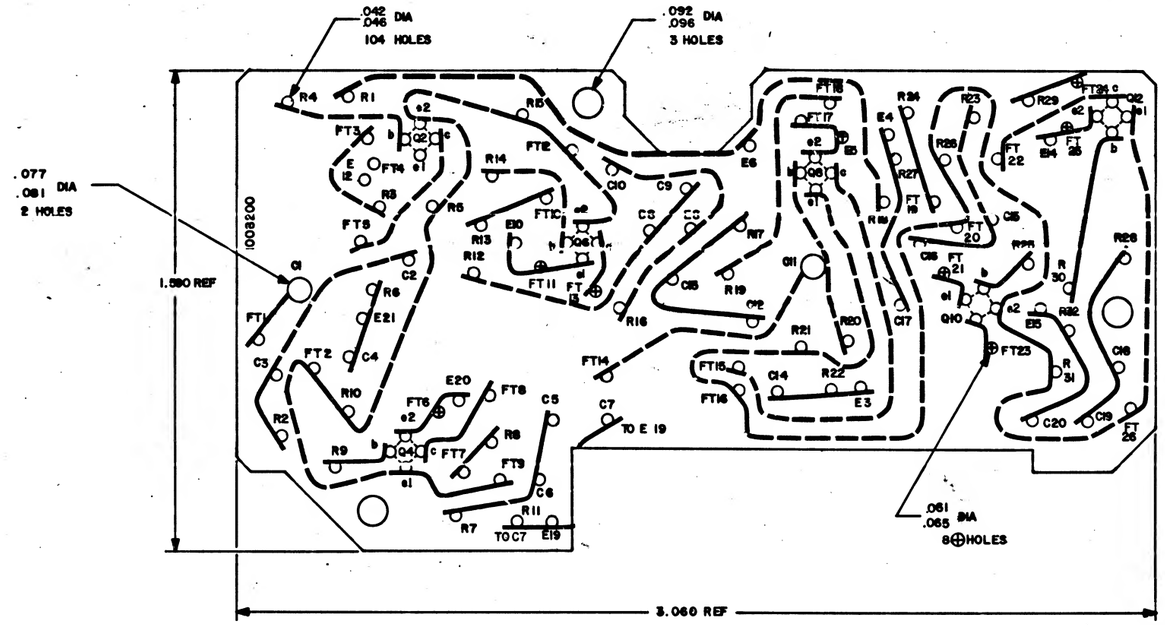
CODE IDENT NO. —— SIZE D NASA DRAWING NO. 1008199
SCALE 5 / 1 WT —— SHEET 1 OF 1

1008199 A

INCHES

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK PLASTIC SHEET PER MIL-P-18177 TYPE GEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. MARK BLACK CHARACTERS PER ND 1002019

REF:
DWG NO. 1008199 PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007127		HEAT TREATMENT	
NEXT ASSY	USED ON	FINAL FINISH	
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2

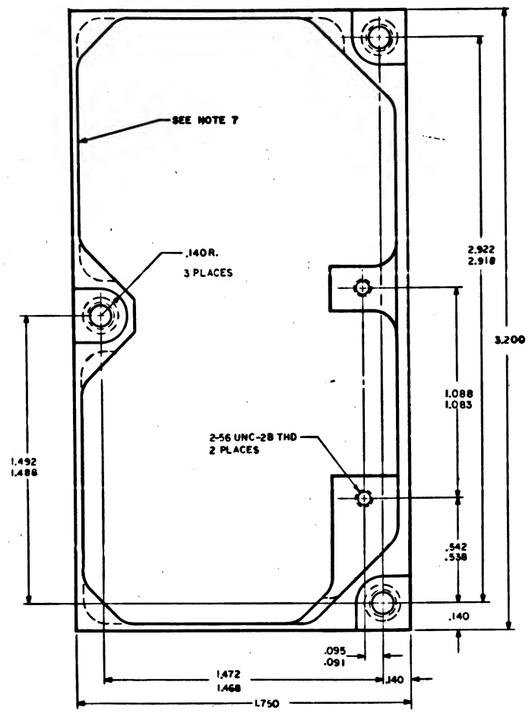
MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS
DRAWN [illegible] DATE 4 MAR 64
CHECKED [illegible] DATE 4/6/64
APPROVAL [illegible] DATE 4/6/64
APPROVAL [illegible] DATE 4/7/64
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

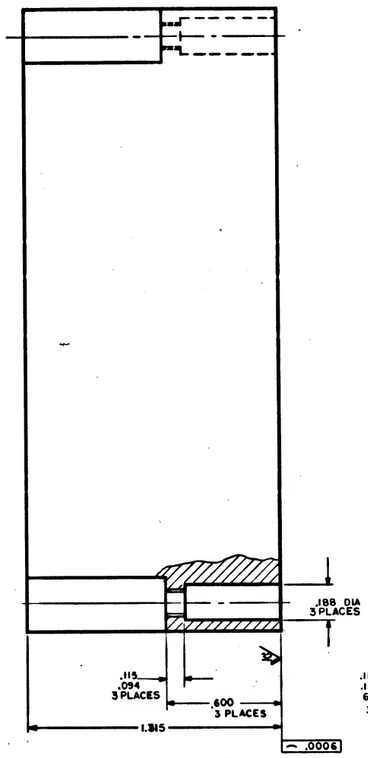
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

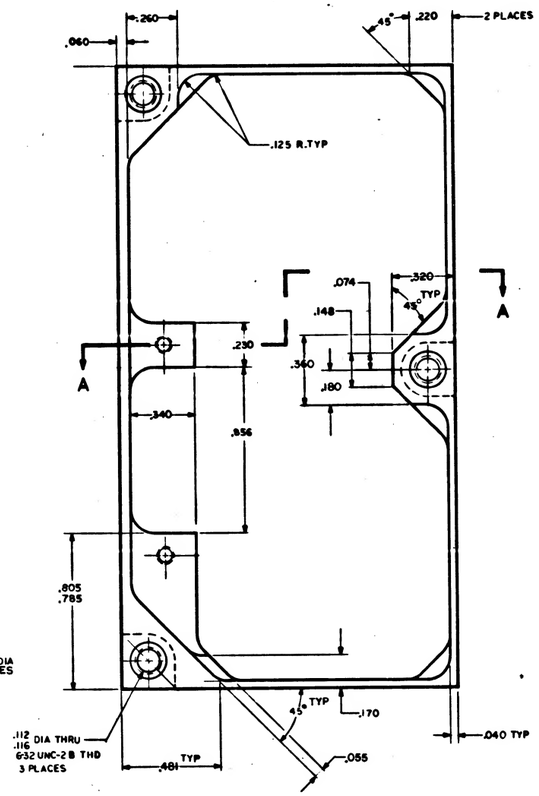
WIRING BOARD BOTTOM
SIGNAL CONDITIONER ASSEMBLY
OPTICS

CODE IDENT NO.
SIZE D
NASA DRAWING NO. 1008200
SCALE 5/1
WT
SHEET 1 OF 1

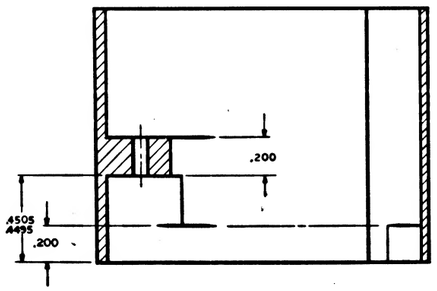
INCHES
0







NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202, TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX.
5. UNLESS OTHERWISE SPECIFIED .125 ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN. MARK PER ND 1002019. LOCATE CENTRALLY



SECTION A-A

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007128			
NEXT ASSY	USED ON		
APPLICATION			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES ± 1°
± — XXX ± .005
XX .02
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT —
FINISH SEE NOTE 3

M I T INSTRUMENTATION LAB
Cambridge, Mass.
DRN. BY
DESIGNED
CHECKED
APPROVED
APPROVED
NASA APPROVAL
INST. APPROVAL

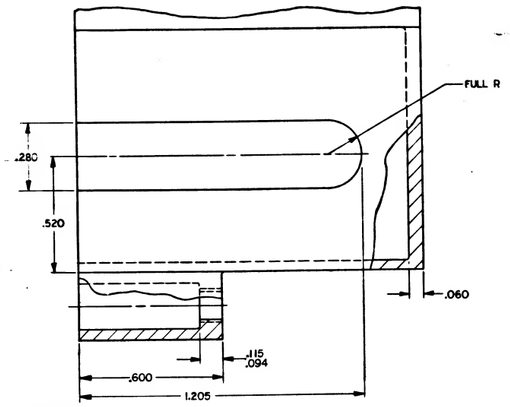
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

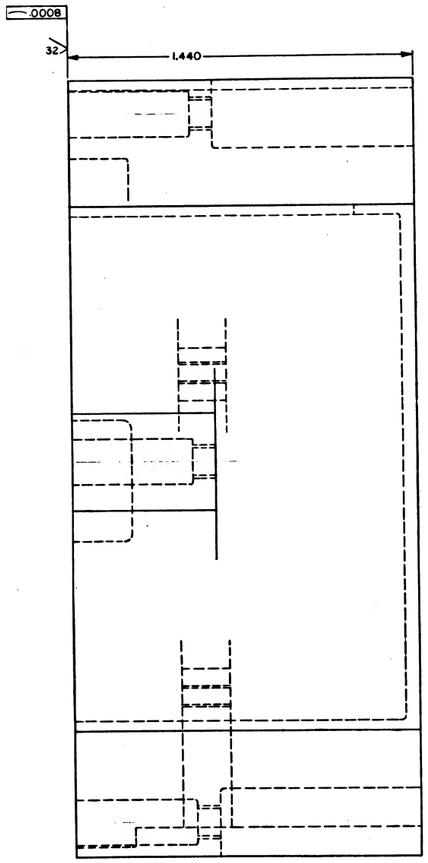
FRAME,
SIGNAL CONDITIONER,
CDU RESOLVER

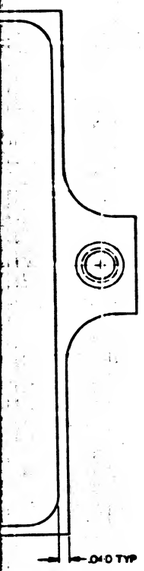
CAGE SHEET NO. — SIZE E NASA DRAWING NO. 1008205
SCALE 4/1 WT — SHEET 1 OF 1

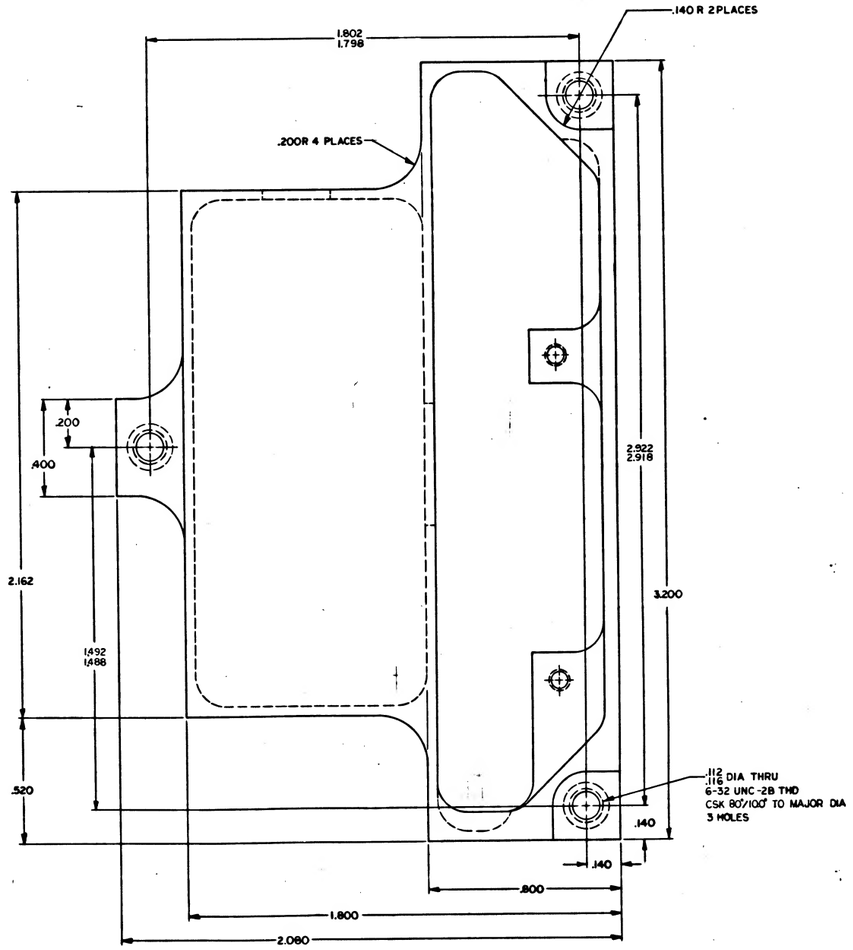
A 1008206

REVISIONS 11-69			
SYM	DESCRIPTION	DATE	APPROVAL
A	REVISED PER TDRR 19599	3/6/70	









QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	REV NO.
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ±.005 ANGLES ± 1° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass. DRAWN DATE 17 AUG 64 CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
1007126	NEXT ASSY	USED ON APPLICATION	MATERIAL SEE NOTE 2 HEAT TREATMENT FINAL FINISH SEE NOTE 3

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME
SIGNAL CONDITIONER
SCALER

CODE IDENT NO. — SIZE J NASA DRAWING NO. 1008206
SCALE 5:1 WT — SHEET 1 OF 1

MASTER

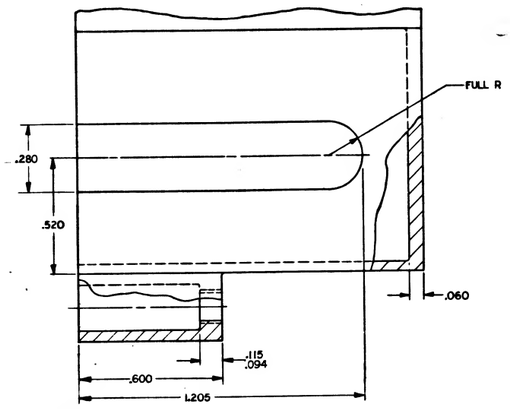
1008206 REV A SHT

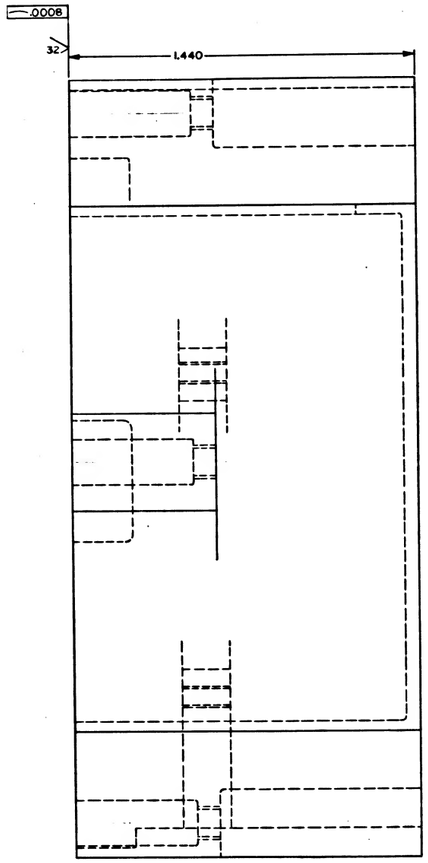
1008206 A

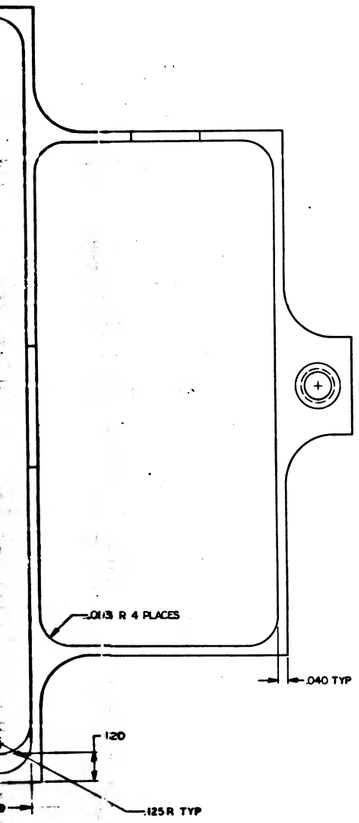
(3H)

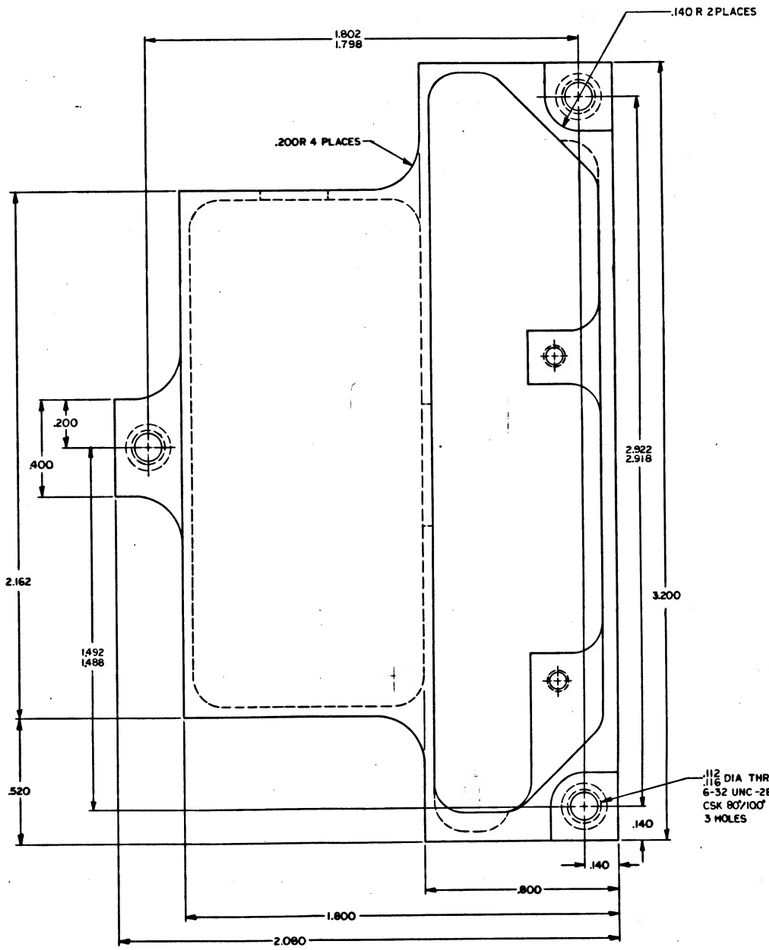
REVISIONS			
QTY	DESCRIPTION	DATE	APPROVED
A	REVISED PER TDRR 1135		

1008206 A









QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FSCM NO.

LIST OF MATERIALS

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ±.005 DECIMALS ±.005 ANGLES ±1° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass. DRAWN DATE CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
		MATERIAL SEE NOTE 2	
1007126		HEAT TREATMENT	
NEXT ASSY	USED ON	FINAL FINISH SEE NOTE 3	
APPLICATION			SCALE 5:1

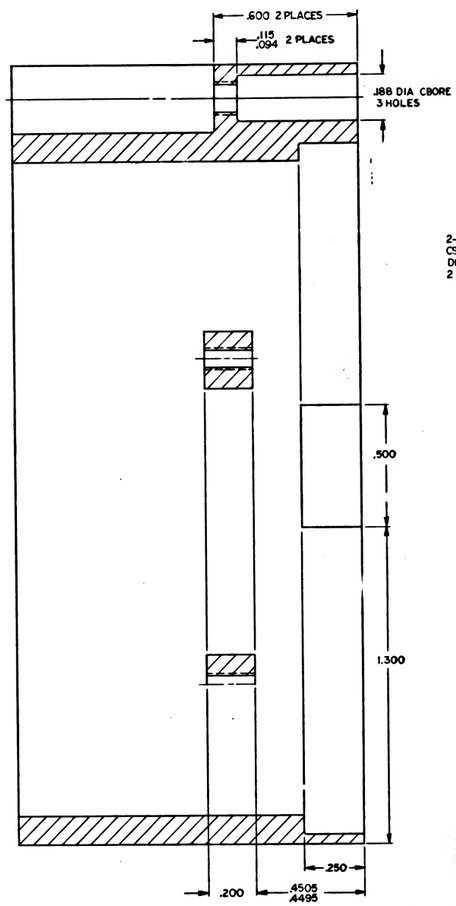
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME
SIGNAL CONDITIONER
SCALER

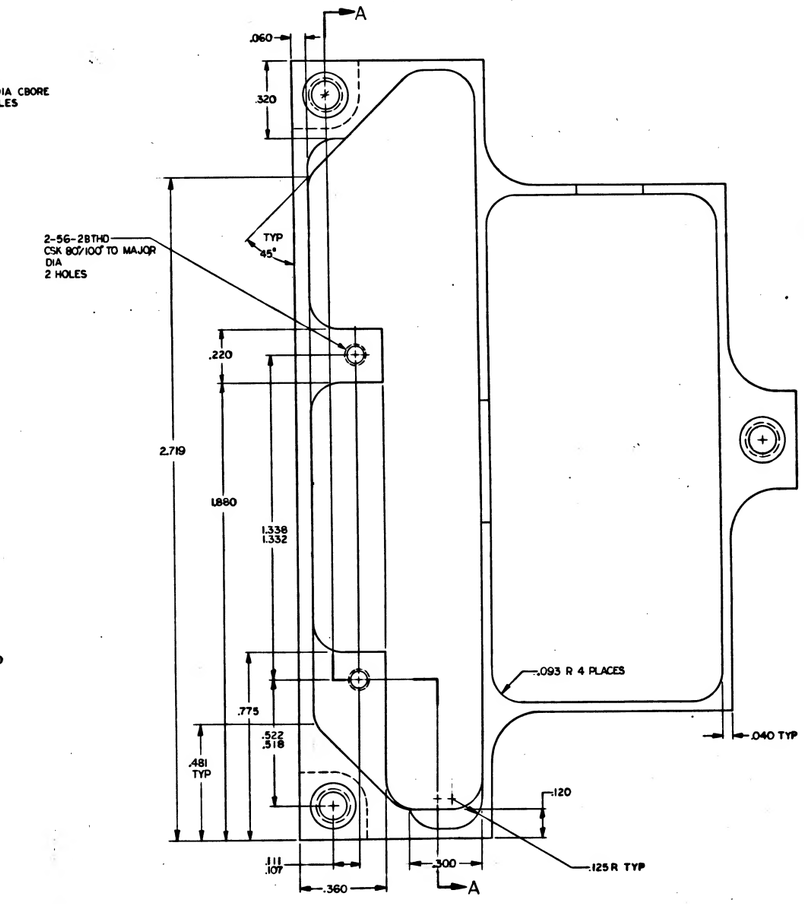
CODE IDENT NO. —
SIZE J
DWG NO. 1008206
SHEET OF
WT —

MASTER

1008206 REV A SHT



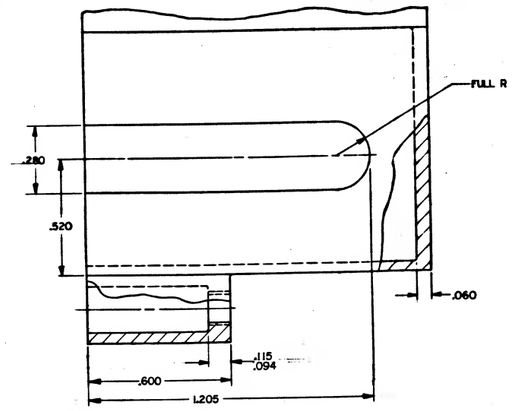
SECTION A-A

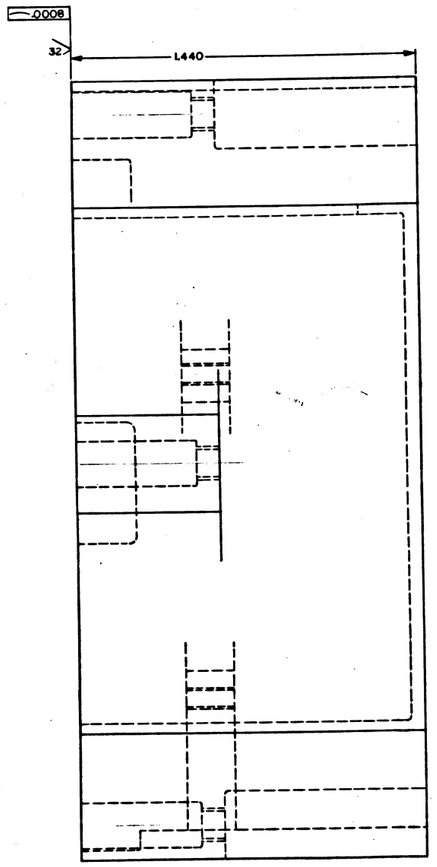


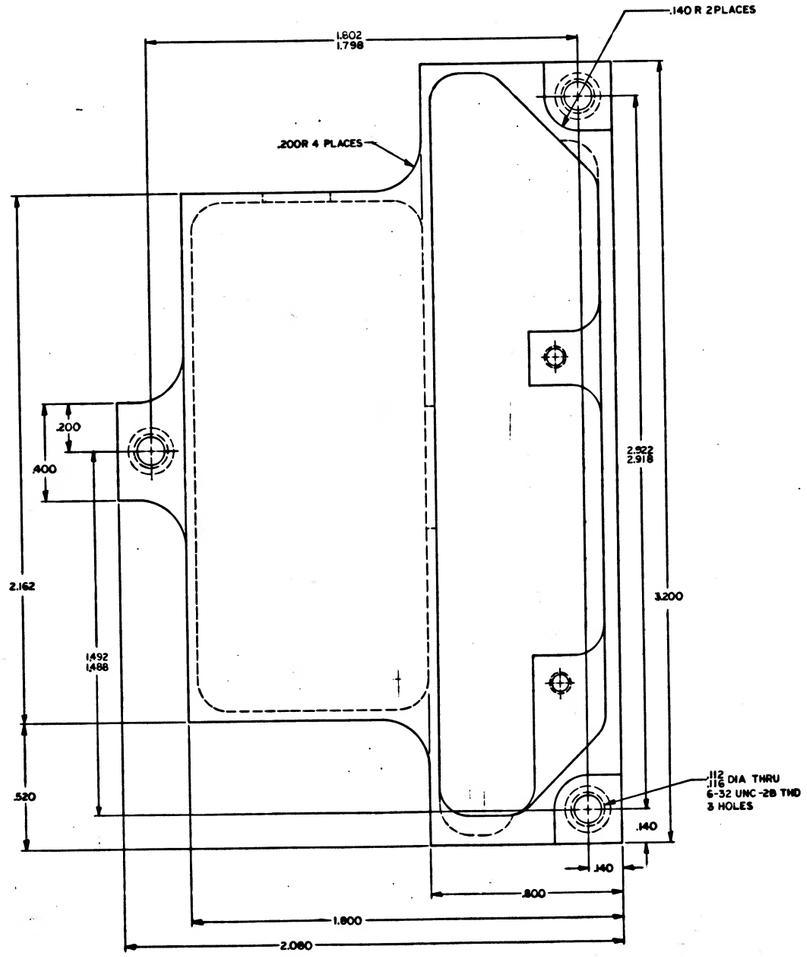
NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH [redacted] BED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY [redacted]
3. FINISH: ANODIZE PER MIL-[redacted]8202 TYPE J, CLASS C
4. UNLESS OTHERWISE SPECIFIED [redacted] MAX
5. UNLESS OTHERWISE SPECIFIED 125 √ ALL OVER
6. REMOVE ALL BURRS AND BREAK [redacted]
7. IDENTIFY PER ND1002019

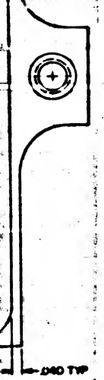
1008206 REV A SHT

1008206





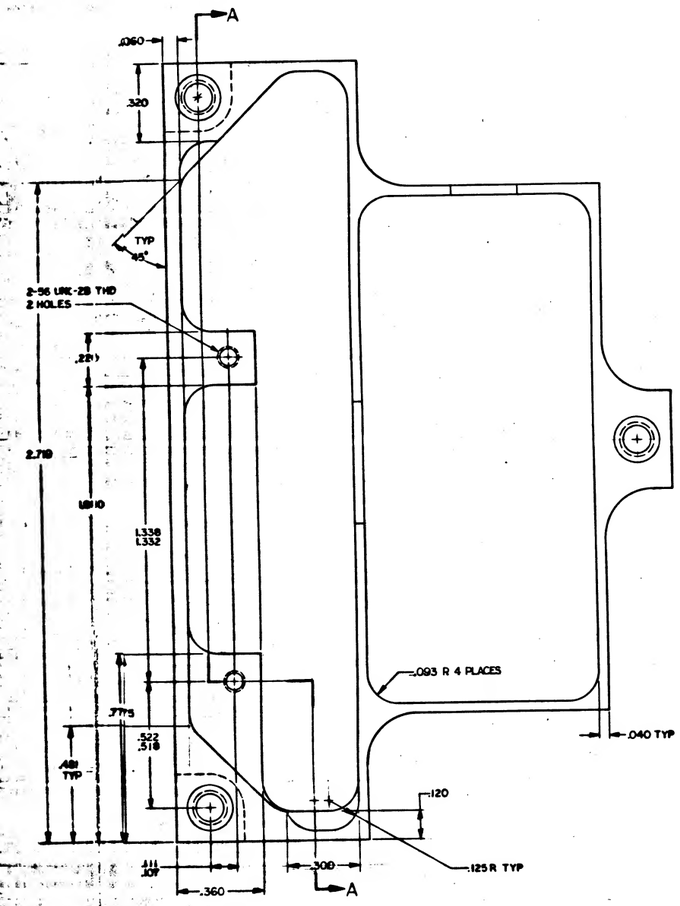


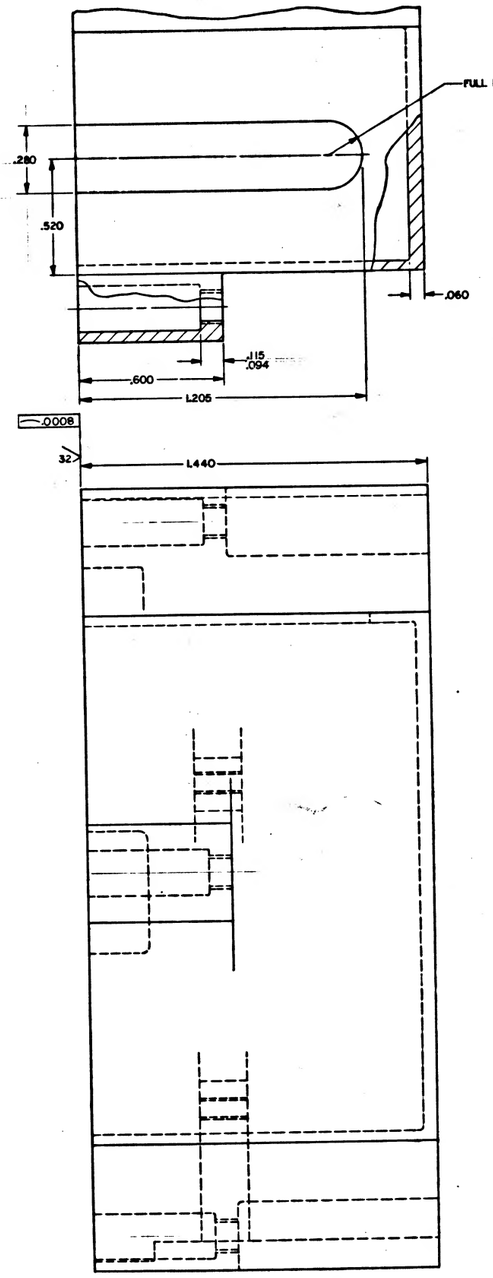


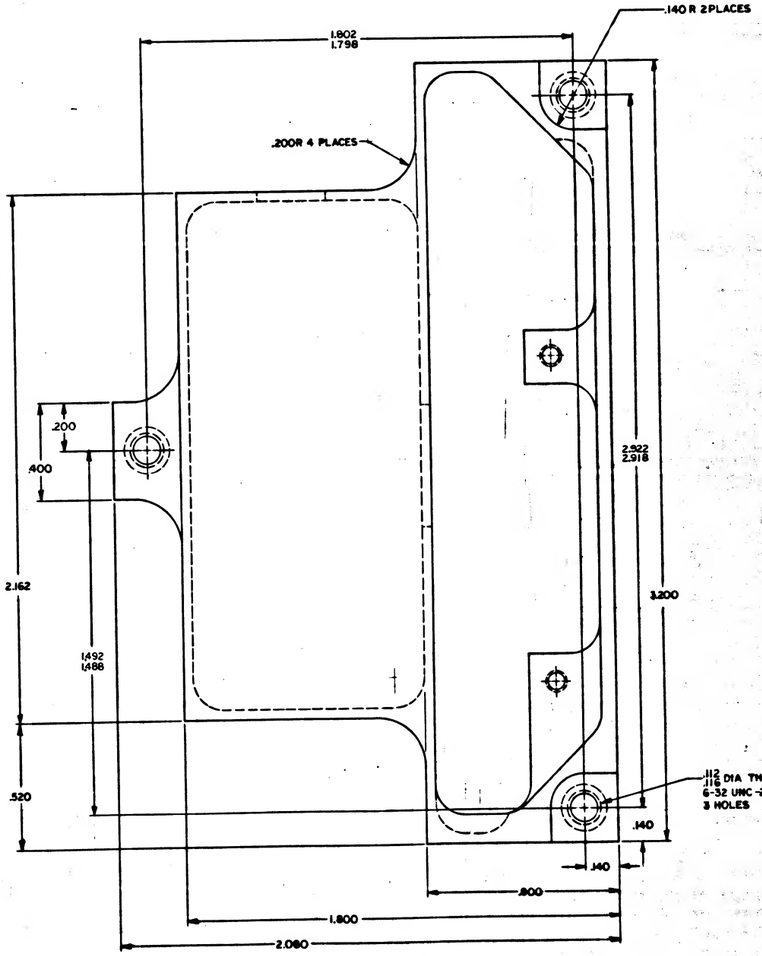
QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007126		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS .005 ANGLES ± 1° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass. DRAWN CHECKED APPROVAL APPROVAL NASA APPROVAL MIT APPROVAL
NEXT ASSY	USED ON	MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION		HEAT TREATMENT	FRAME SIGNAL CONDITIONER SCALER
		FINISH SEE NOTE 3	CODE IDENT NO. — SIZE J NASA DRAWING NO. 1008206
			SCALE 5/1 WT — SHEET 1 OF 1

MASTER







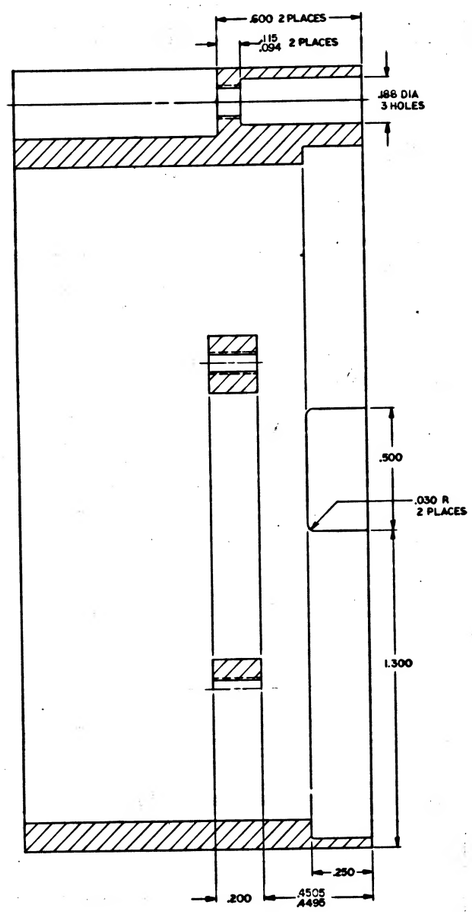
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	
DO NOT SCALE THIS DRAWING	
NEXT ASSY	USED ON
APPLICATION	
1007126	
NEXT ASSY	USED ON
APPLICATION	

SEE NOTE

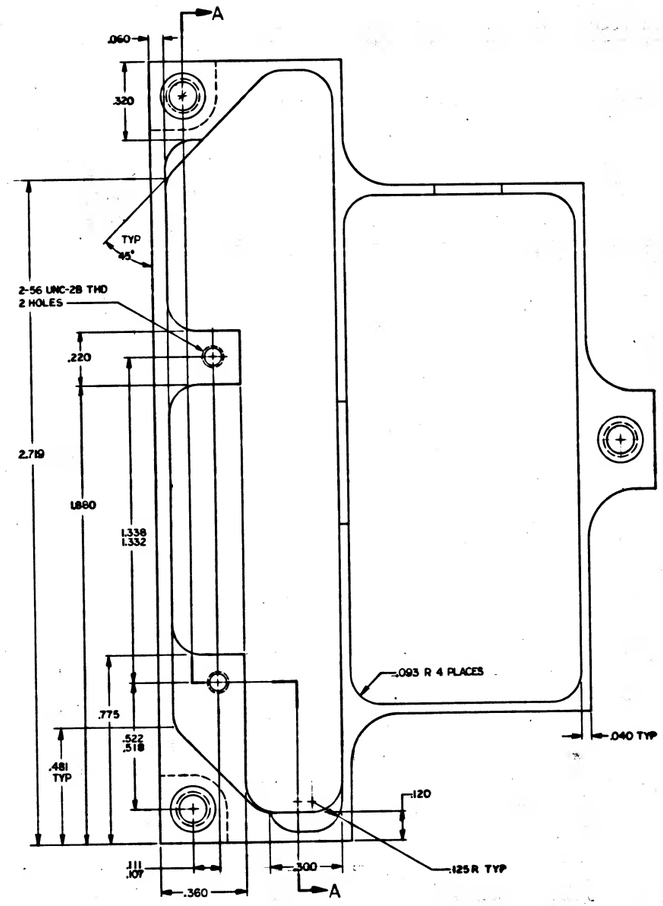
SEE NOTE

MASTER

1008206 SHT

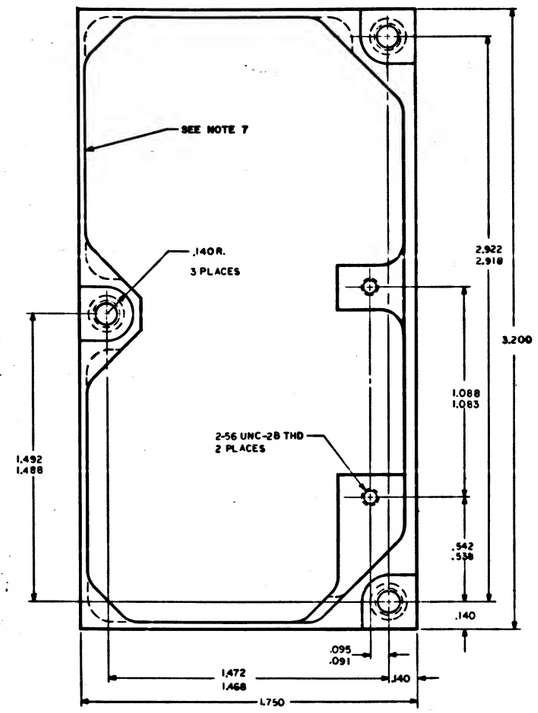


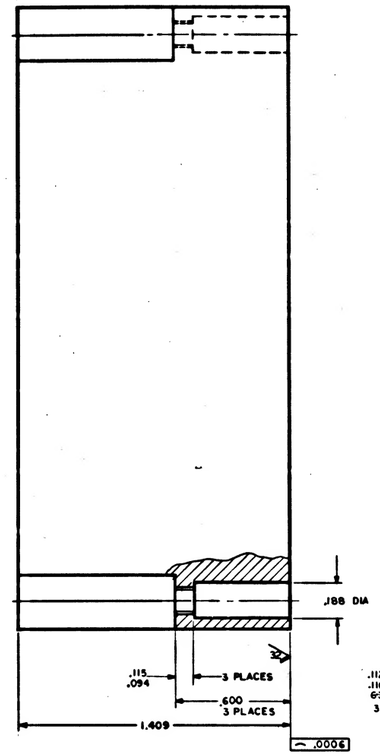
SECTION A-A

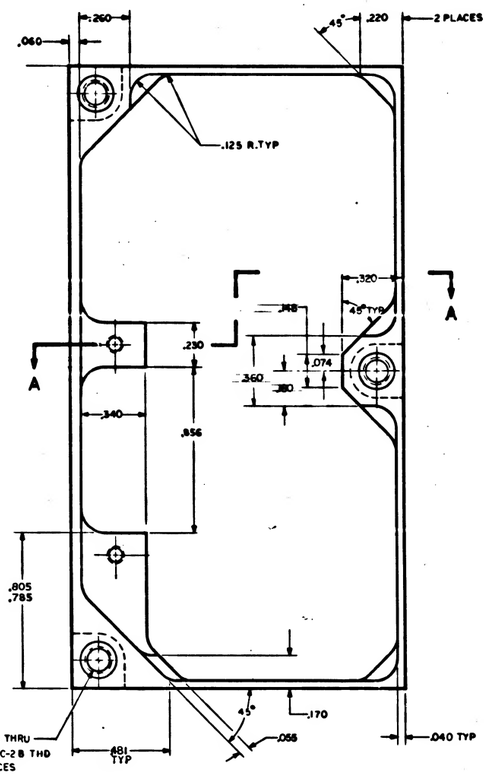


NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII .010 MAX
5. UNLESS OTHERWISE SPECIFIED .125/ ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. IDENTIFY PER ND1002019

1008206 SHT

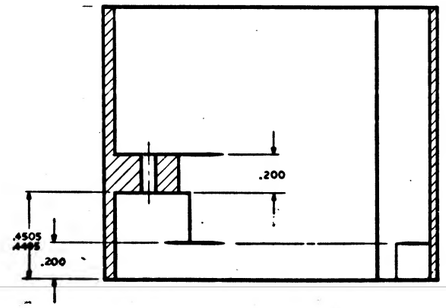






NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK-60A-T5 PER QQ-M-31
3. FINISH: ANODIZE PER MIL-M-45202, TYPE I, CLASS C
4. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX.
5. UNLESS OTHERWISE SPECIFIED 125/ALL OVER
6. REMOVE ALL BURRS AND BREAK SHARP EDGES .005/.015
7. PART NUMBER AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN AREA SHOWN. MARK PER ND 1002019. LOCATE CENTRALLY



SECTION A-A

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

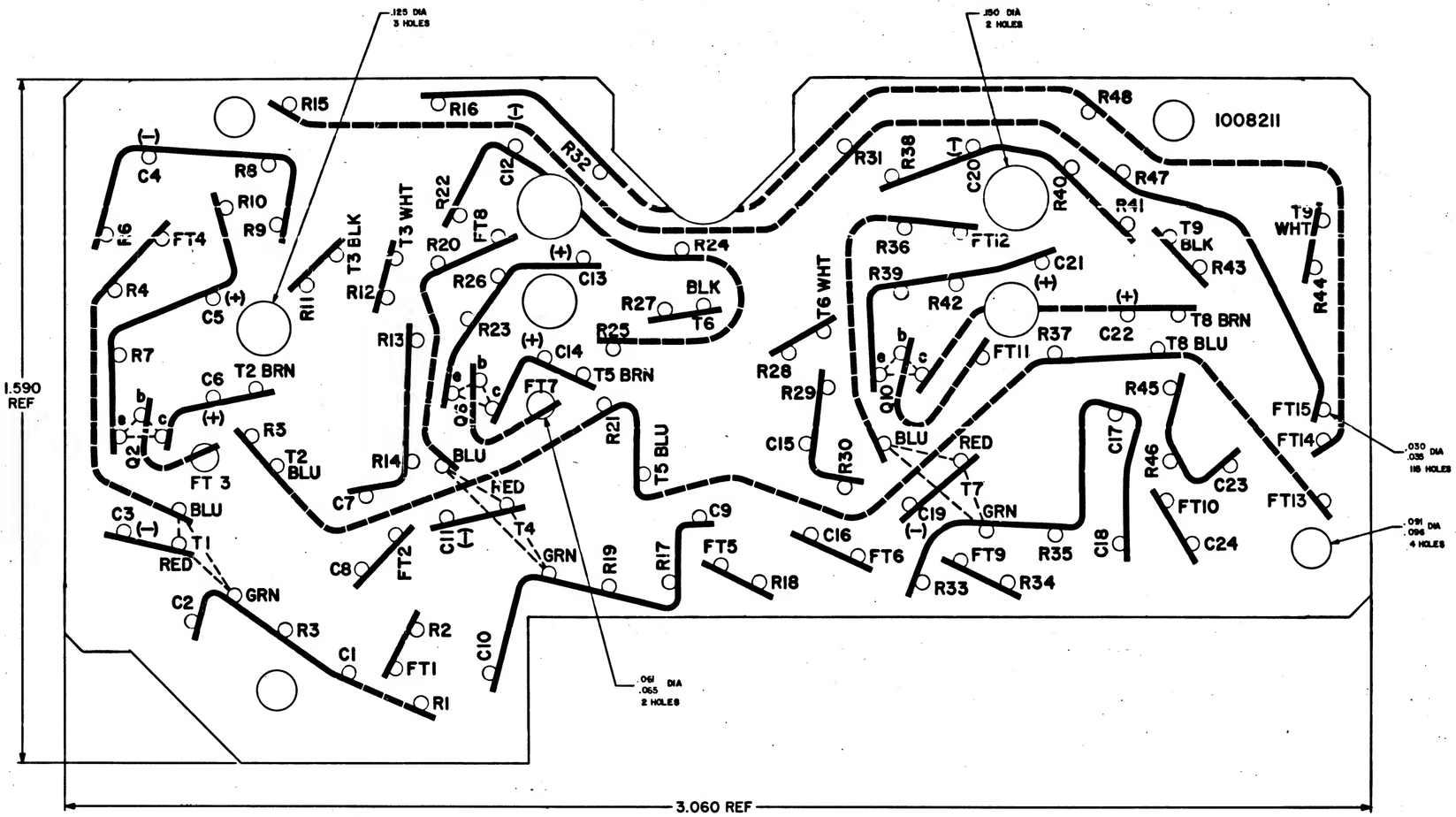
LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES .= ± XXX ± .005 ± 1° XX ± .02 DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB Cambridge, Mass.
MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
HEAT TREATMENT	DRAWN [illegible] DATE 6-7-67
FINISH SEE NOTE 3	CHECKED [illegible]
1007127 NEXT ASSY / USED ON APPLICATION	APPROVAL [illegible]
	APPROVAL [illegible]
	NASA APPROVAL
	MIT APPROVAL

FRAME,
SIGNAL CONDITIONER,
OPTICS

CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1008207

SCALE 4/1 WT — SHEET 1 OF 1



REF:
DRAWING NO. 1008213 FOR PHOTOGRAPHIC MASTER

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: .031 THICK PLASTIC SHEET PER MIL-P-18177 TYPE SEE
3. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133
4. MARK BLACK CHARACTERS PER ND 1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

1007128	
NEXT ASSY	USED ON
APPLICATION	

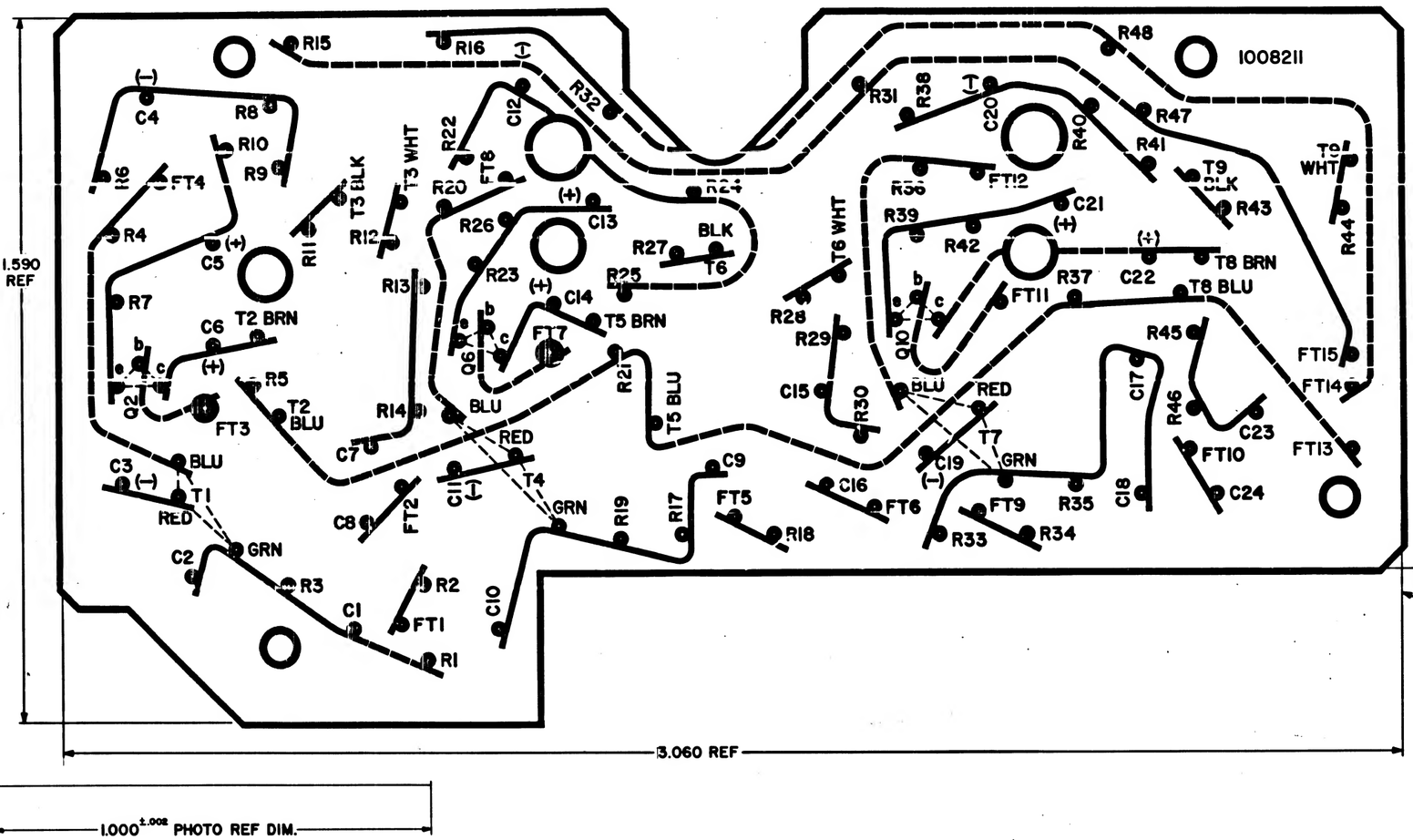
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±— DECIMALS ±.010 ANGLES ±—
DO NOT SCALE THIS DRAWING
MATERIAL
SEE NOTE 2
HEAT TREATMENT
FINISH
FINISH

MIT INSTRUMENTATION LAB
DRAWN Ken Hardy DATE 6-5
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
QUALITY APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING BOARD, BOTTOM
SIGNAL CONDITIONER
CDU RESOLVER

CAGE SHEET NO. — SIZE E NASA DRAWING NO. 1008211
SCALE 10/1 SHEET 1 OF 1



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
4. CUT TO WITHIN .010 OF TRIM LINE

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINISH
NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB Cambridge, Mass.
DES. IN
DRAWN DATE
CHECKED
APPROVAL
APPROVAL
NASA APPROVAL
MIT APPROVAL

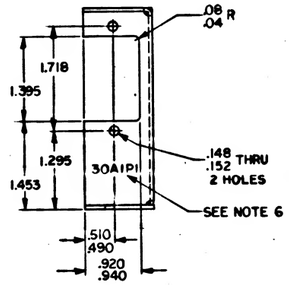
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

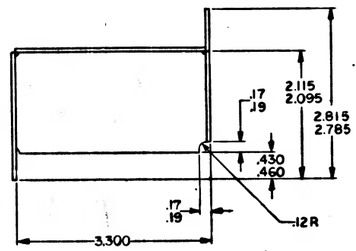
PHOTOGRAPHIC MASTER
WIRING BOARD, BOTTOM, SIGNAL CONDITIONER, CDU RESOLVER

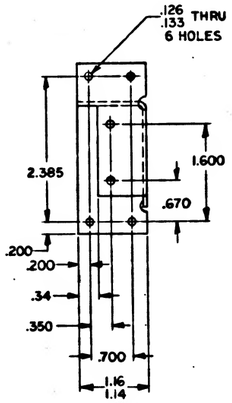
CODE IDENT NO. —
SIZE E
NASA DRAWING NO. 1008213
SCALE 10/1
WT —
SHEET 1 OF 1

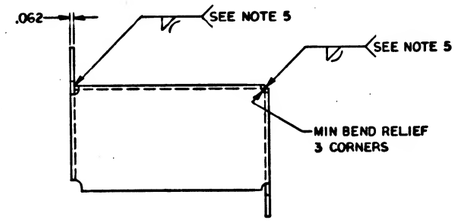
NOTICE — UNLESS GOVERNMENT SHARPENAL SPECIFICATIONS, OR OTHER DATA ARE CITED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT INCURS NO RESPONSIBILITY, OR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 11077			
SYM	DESCRIPTION	DATE	APPROVAL









NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: AL ALY 5052-H32 PER QQ-A-250/8
3. FINISH: ANODIZE PER MIL-A-8625 TYPE II DYED BLACK
4. ALL INSIDE BEND RADII .06 R
5. WELD PER MIL-W-6858 CLASS B GROUP A. INCLUDE BEND RELIEF.
6. MARK .140/.100 HIGH WHITE CHARACTERS PER ND 1002019 CENTRALIZE AS SHOWN
7. IDENTIFY PER ND 1002019

MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			

1007130	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± —— DECIMALS ±.005 ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL SEE NOTE 2
HEAT TREATMENT ——
FINAL FINISH SEE NOTE 3

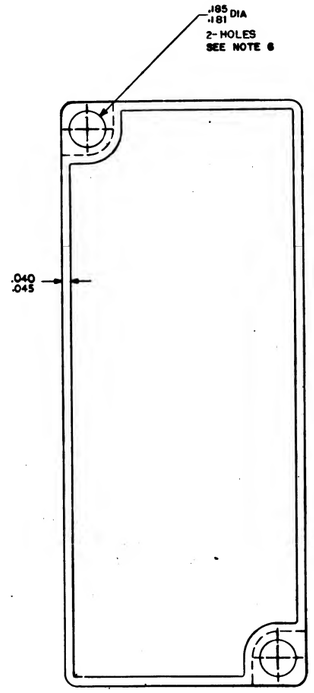
M I T INSTRUMENTATION LAB CAMBRIDGE, MASS.
DWG. NO. —— CONTRACT ——
DRAWN R. Hughes DATE 14 JULY 66
CHECKED [illegible]
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

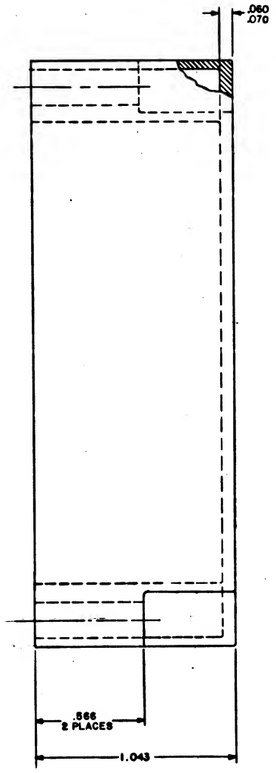
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

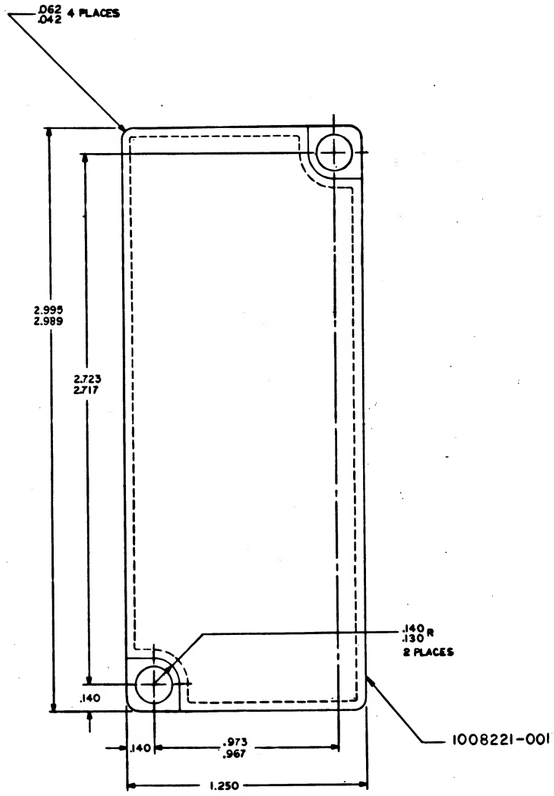
BRACKET, CONNECTOR SIGNAL CONDITIONER

CODE IDENT NO. ——
SIZE D
NASA DRAWING NO. 1008214
SCALE 1/1
WT ——
SHEET 1 OF 1

INCHES
0 1 2







NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: PER ND 1002134
3. UNLESS OTHERWISE SPECIFIED ALL INSIDE RADII .010 MAX
4. FINISH: 125 OR BETTER INSIDE AND OUTSIDE EXCEPT FOR MOLD MARKS
5. IDENTIFY PER ND1002019
6. BLEMISHES, NOT IN EXCESS OF 30% OF BEARING SURFACES, ACCEPTABLE INSIDE HOLES

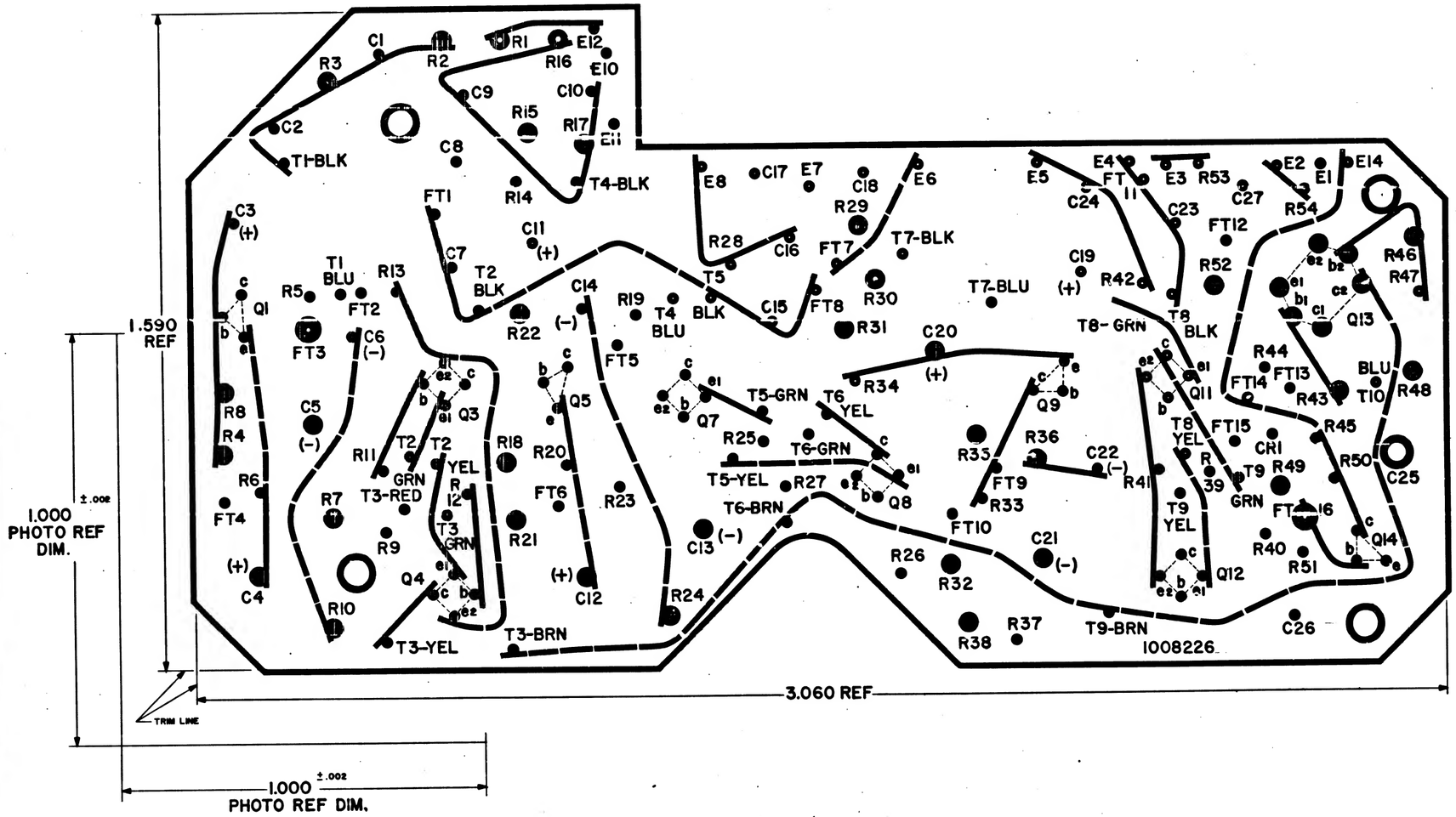
MASTER

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO
		LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± .005 ±	M I T INSTRUMENTATION LAB Cambridge, Mass.	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		DO NOT SCALE THIS DRAWING	DRAWN DATE 2-5-70	HOUSING, IRIG PREAMP MOLDED
		MATERIAL SEE NOTE 2	CHECKED	
		HEAT TREATMENT	APPROVAL	
1007210		FINAL FINISH	APPROVAL	
NEXT ASSY	USED ON		NASA APPROVAL 2-9-70	CODE IDENT NO — SIZE E NASA DRAWING NO 1008221
APPLICATION			MIT APPROVAL	SCALE 4/1 WT SHEET 1 OF 1

1008221

REVISIONS					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
		73090				



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN

MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL —

NEXT ASSY | USED ON
APPLICATION

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

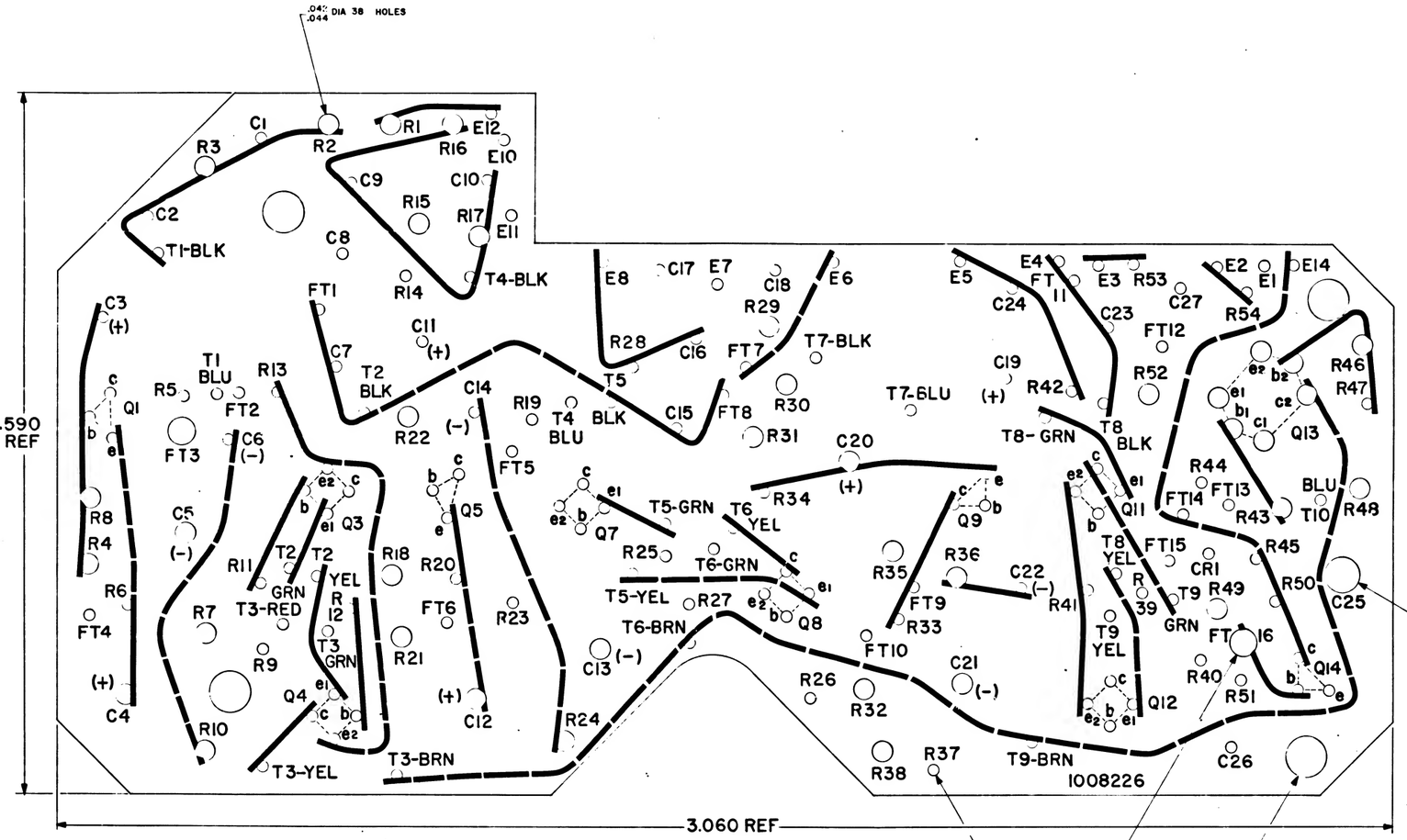
DRAWN Louis Blanco 2/24/66
CHECKED [illegible] 2/25/66
APPROVED [illegible] 2/24/66
APPROVED [illegible] 2/24/66
APPROVED MIT [illegible] 2/24/66
APPROVED MSC [illegible] DATE

PHOTOGRAPHIC MASTER
WIRING BOARD TOP
SIGNAL CONDITIONER IR16

CODE IDENT NO. | SIZE E | DRAWING NO. 1008225
SCALE 10/1 | SHEET 1 OF 1

1008225

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED
A		REVISED PER TDRR 17629	A.H.		24-MAR 65	



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL .031 THICK PLASTIC SHEET PER MIL-P-18177, TYPE GEE
3. MARK BLACK PER ND 1002019
4. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133

REF:
DRAWING NO. 1008225 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO
			LIST OF MATERIALS	
	1007131	SEE NOTE 2		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± — .x — ±
DO NOT SCALE THIS DRAWING

MATERIAL

NEXT ASSY | USED ON | APPLICATION

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

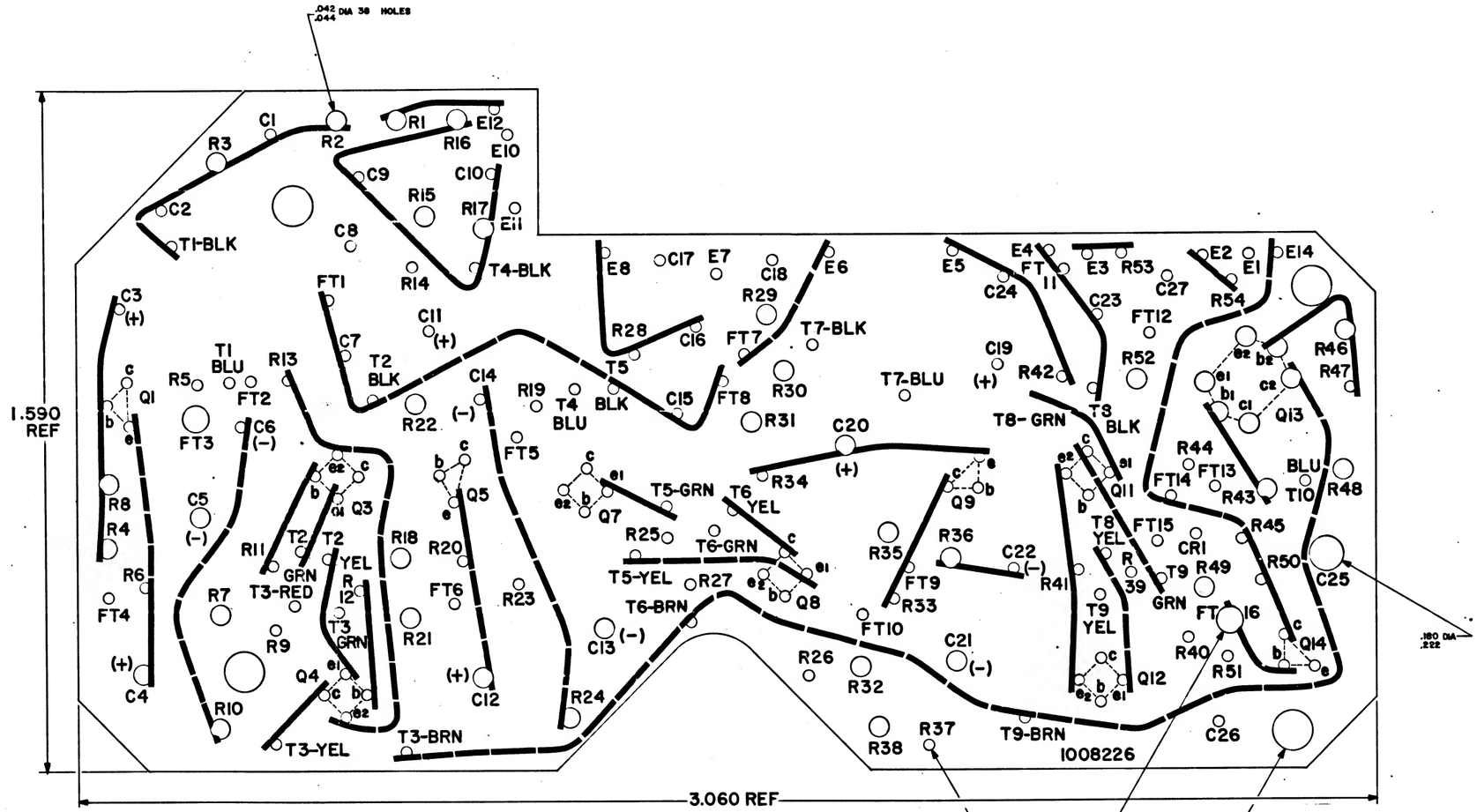
DRAWN Louis A Lussi 2 APR 65
CHECKED
APPROVED
APPROVED

WIRING BOARD TOP
SIGNAL CONDITIONER IRIG

APPROVED MIT
APPROVED MSC
DATE 10/1

CODE IDENT NO. 71225 | SIZE E | DRAWING NO. 1008226 | SHEET 1 OF 1

1008226 A



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL .031 THICK PLASTIC SHEET PER MIL-P-18177, TYPE GEE
3. MARK BLACK PER ND 1002019
4. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133

REF:
DRAWING NO. 1008225 FOR PHOTOGRAPHIC MASTER

REVISIONS 3090

SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FWD NO.
			LIST OF MATERIALS	

1007131	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

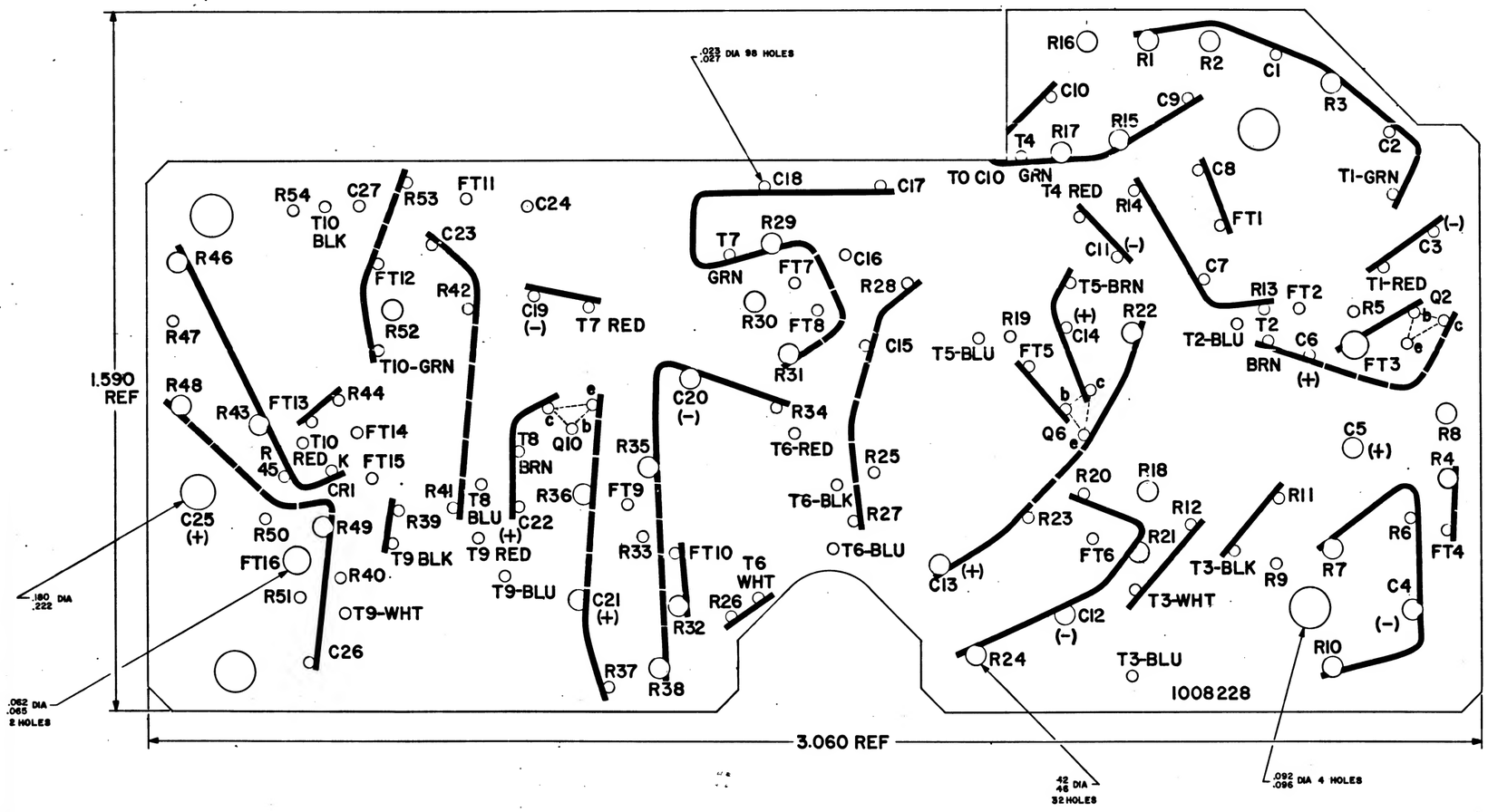
DRAWN	Lance & Lynch 8-1-68
CHECKED	W. Wright 8-1-68
APPROVED	W. Wright 8-1-68
APPROVED	[illegible]
APPROVED MIT	W. Wright 8-1-68
APPROVED MSC	[illegible]

WIRING BOARD TOP
SIGNAL CONDITIONER WRIG

CODE IDENT NO.	SIZE	DRAWING NO.
	E	1008226

DATE 8-1-68 SCALE [illegible] SHEET 1 OF 1

INCHES



NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL .031 PLASTIC SHEET PER MIL-P-19177, TYPE GEE
3. MARK BLACK PER ND 1002019
4. PREPARE BOARD FOR PHOTOGRAPHY PER ND 1002133

REF:
DRAWING NO. 1008227 FOR PHOTOGRAPHIC MASTER

QTY REQD	PART OR IDENTIFYING NO.	MATERIAL OR NOTES	NOMENCLATURE OR DESCRIPTION	FIND NO.
			LIST OF MATERIALS	

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN μf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS ±— DECIMALS ±— ANGLES ±— DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.
1007131		MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
NEXT ASSY	USED ON		DRAWN Louis B Mack 2/15/68
APPLICATION			CHECKED R. Stevens 2/15/68
			APPROVED W. Blair 2/16/68
			APPROVED [illegible] 2/16/68
			APPROVED MIT [illegible] 2/16/68
			APPROVED MSC [illegible] 6-6-68
			DATE

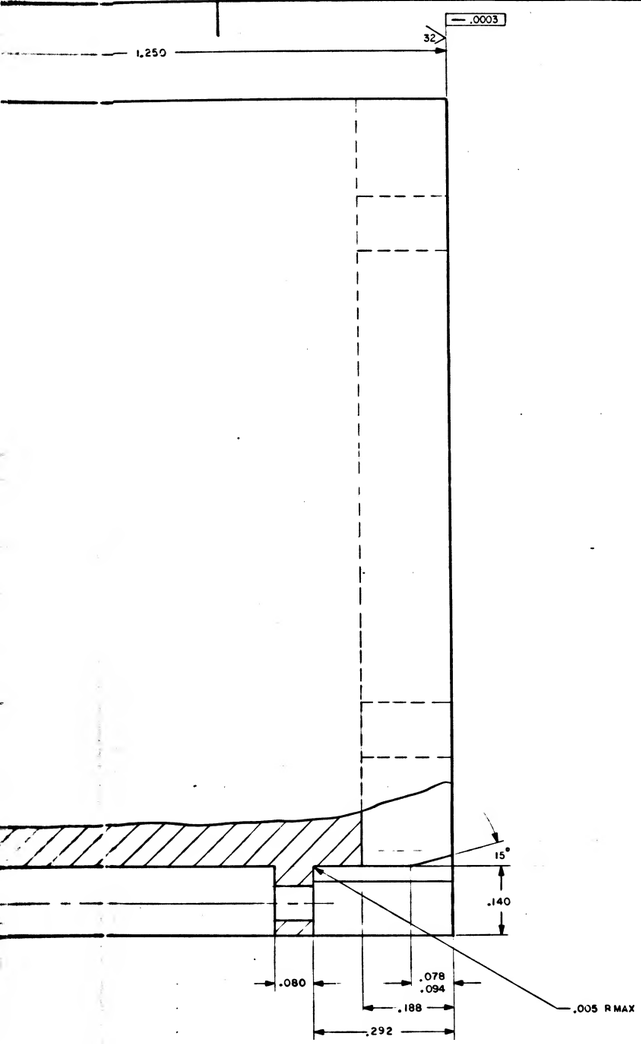
WIRING BOARD BOTTOM
SIGNAL CONDITIONER IRIG

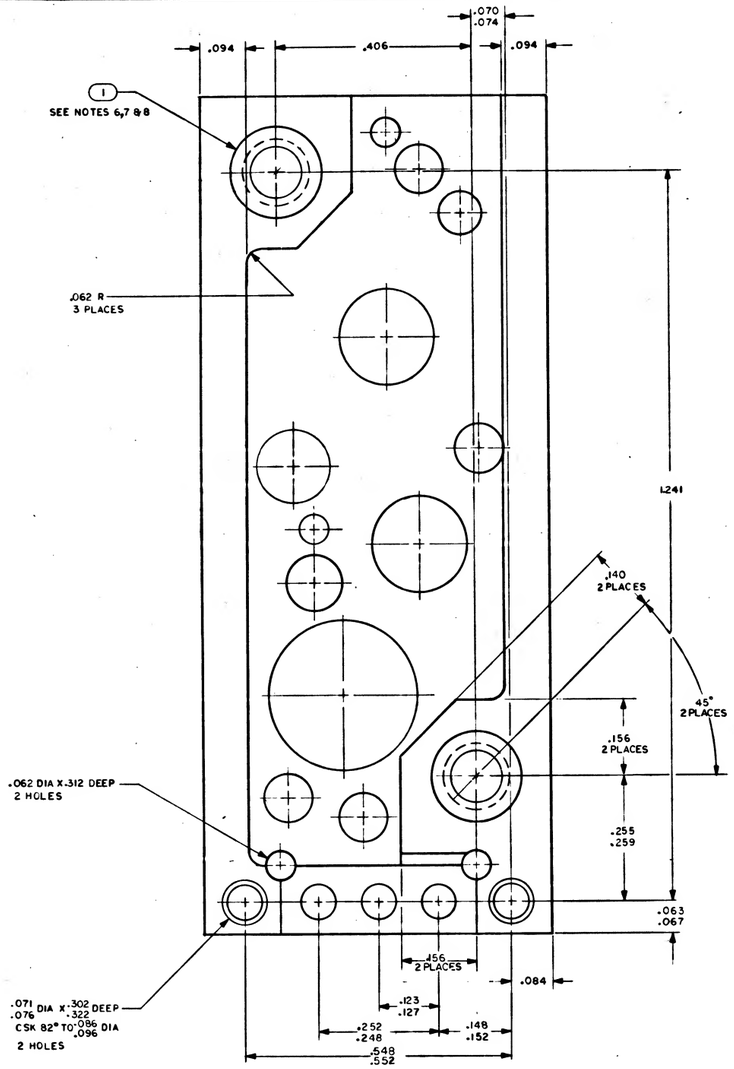
CODE IDENT NO.	SIZE	DRAWING NO
	E	1008228

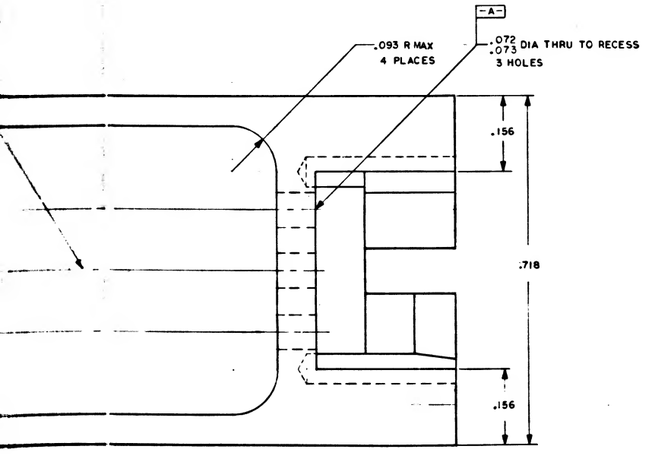
SCALE 10/1 SHEET 1 OF 1

1008228

INCHES
0 1
DIMENSIONS ARE FOR REFERENCE ONLY







REVISIONS					
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	MS 21209 CO 620	INSERT, SCREW LOCKING	

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
.X ± .01 ± 1°
.XX ± .005 ± ½°
DO NOT SCALE THIS DRAWING 2

MATERIAL
SEE NOTE 2

1007218
NEXT ASSY | USED ON
APPLICATION

MIT
INSTRUMENTATION LAB
CAMBRIDGE MASS

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

DRAWN
CHECKED
APPROVED
APPROVED

HEATSINK
PVR DELAY CIRCUIT

APPROVED MIT
APPROVED MSC
DATE

CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 1008235

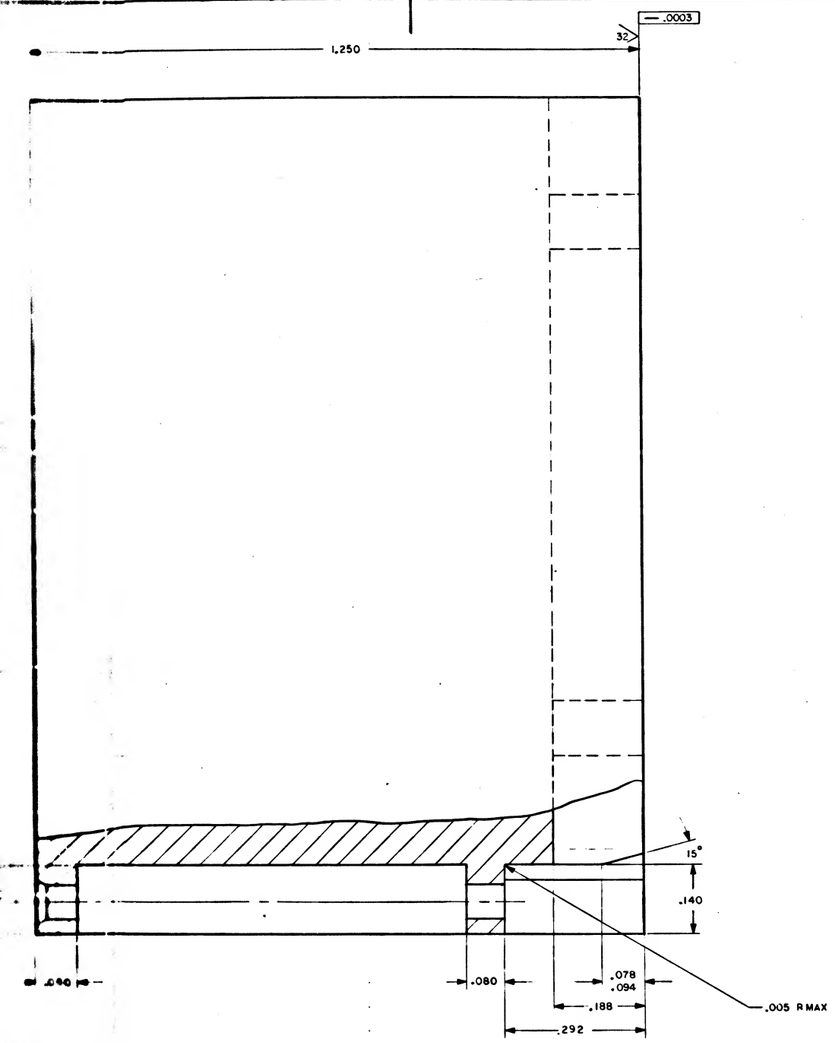
SCALE 10/1 | SHEET 1 OF 1

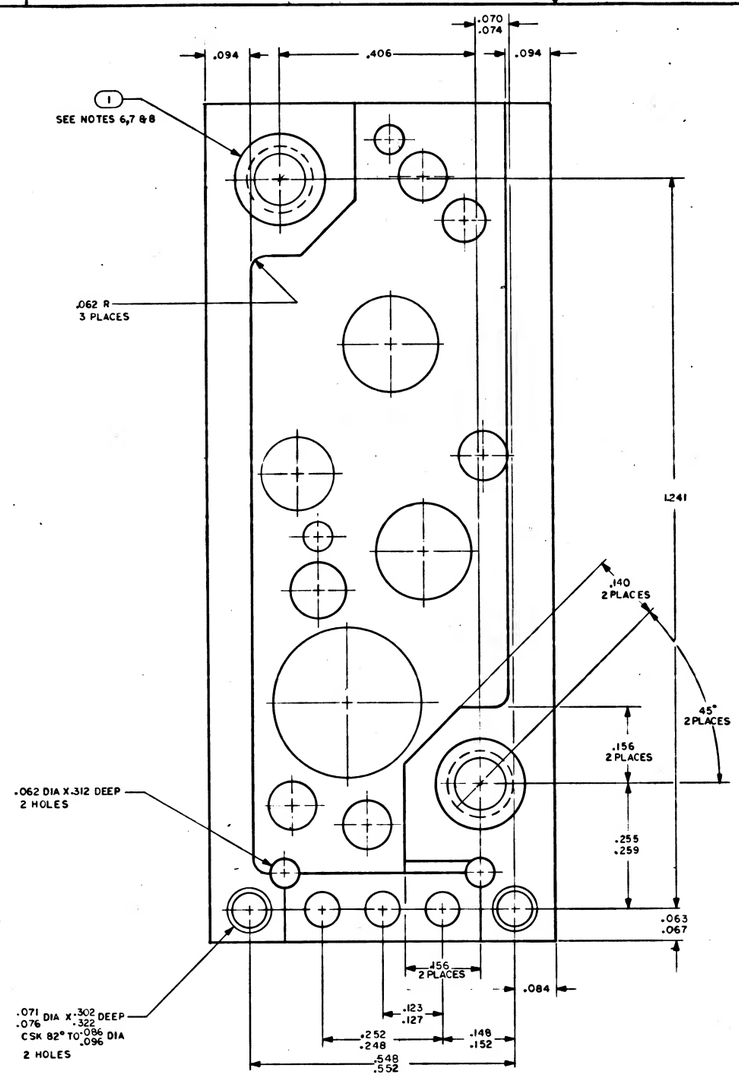
1008235

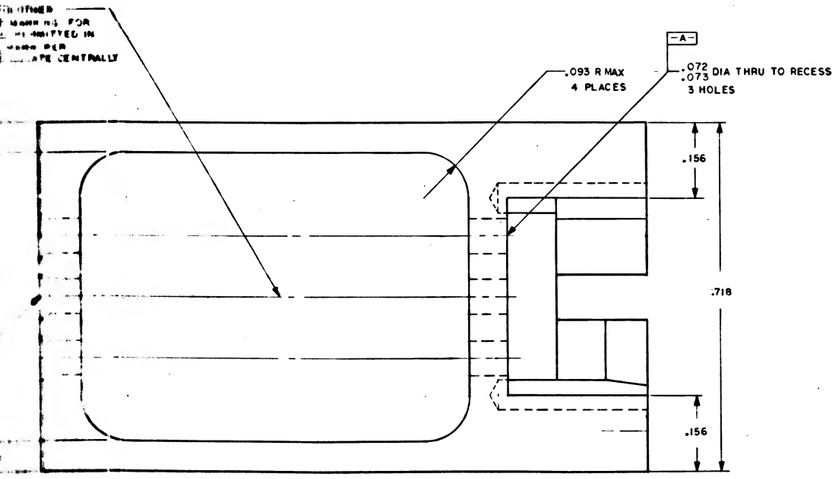
2/14

master

REVISIONS						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED







QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
2	MS 21209 CO 620	INSERT, SCREW LOCK NG	

LIST OF MATERIALS

1007218		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES CAPACITOR VALUES ARE IN μf RESISTOR VALUES ARE IN OHMS TOLERANCES ON FRACTIONS DECIMALS ANGLES ± — .XX ± .0 ± ° DO NOT SCALE THIS DRAWING	MIT INSTRUMENTATION LAB CAMBRIDGE MASS
NEXT ASSY	USED ON	MATERIAL SEE NOTE 2	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION			HEATSINK PVR DELAY CIRCUIT

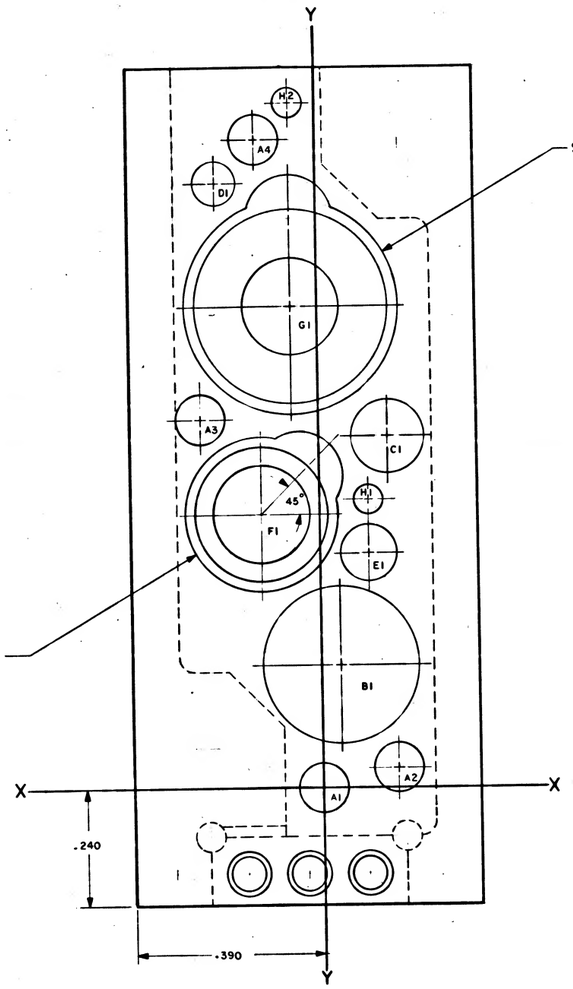
DRAWN — CHECKED — APPROVED — APPROVED — APPROVED MIT — APPROVED MSC — DATE 4/4/67

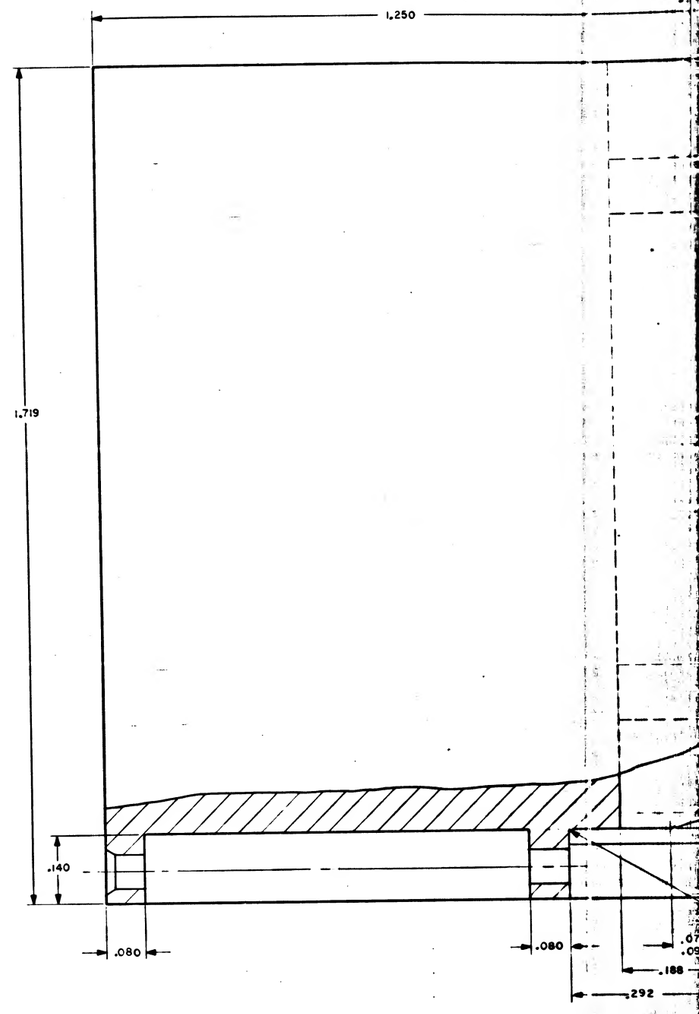
CODE IDENT NO. 80230 | SIZE J | DRAWING NO. 1008235 | SCALE .9/1 | SHEET 1

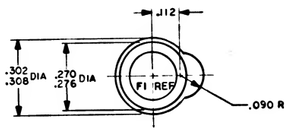
1008235

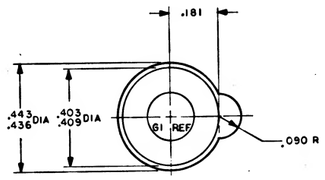
MASTER

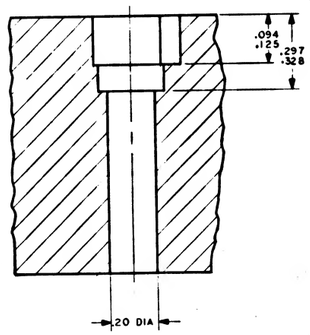
HOLE IDENT	X DIM.	Y DIM.	HOLE DIM.	QTY
A1	.000	.000	.100 .104	4
A2	..25	.040		
A3	-.215	.755		
A4	-.125	1.330		
B1	.040	.250	.330 .337	1
C1	.140	.720	.153 .157	1
D1	-.210	1.245	.088 .092	1
E1	.105	.480	.112 .116	1
F1	-.120	.560	SEE DETAIL A	1
G1	-.055	.988	SEE DETAIL B	1
H1	.100	.590	.058 .062	2
H2	-.055	1.410		



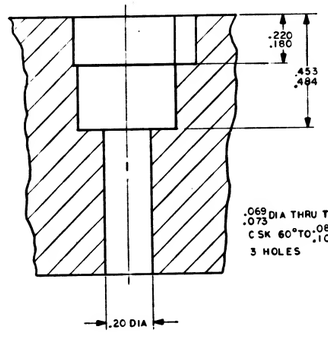




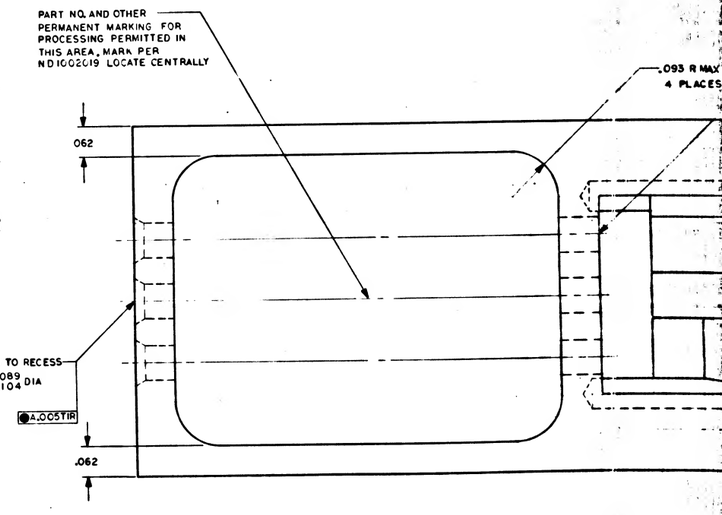




DETAIL A
SCALE 5/1
SEE BOTTOM VIEW FOR ORIENTATION



DETAIL B
SCALE 5/1
SEE BOTTOM VIEW FOR ORIENTATION

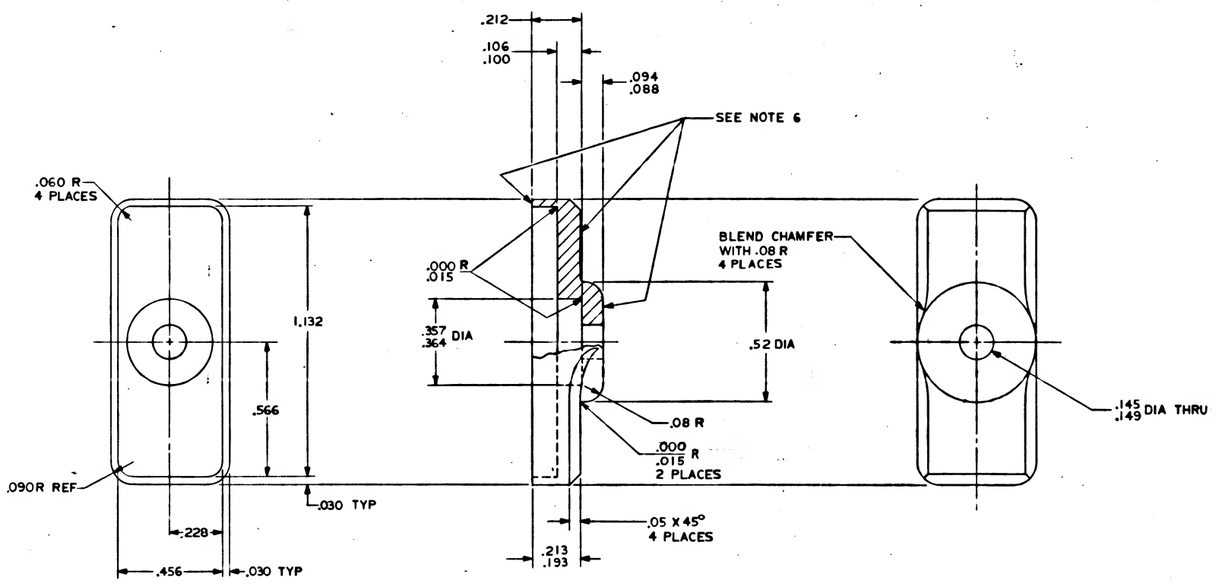


NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ZK60A-T5 PER QQ-M-31, TEMP 5
3. UNLESS OTHERWISE SPECIFIED ALL FILLETS AND RADII TO BE .010 MAX
4. REMOVE BURRS AND SHARP EDGES .005/.015
5. UNLESS OTHERWISE SPECIFIED 125 ALL OVER
6. COAT THREADS OF FIND NO.1 WITH MIL-P-8585, COLOR 'Y'
7. INSTALL FIND NO.1 PER MS 33646
8. FINISH: PLUG INSERT HOLES AND ANODIZE PER MIL-M-45202, TYPE I, CLASS C

1008235

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 22195							
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED	
A		REVISED PER TDRR 27839	B.	A.U.	13-APR-66		



NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: 6061-T6-AL PER QQ-A-250/11 TEMP 6
3. REMOVE BURRS AND SHARP EDGES .005/.015
4. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED
5. ANODIZE PER MIL-A-8625 TYPE II DYED BLACK
6. PAINT INDICATED AREAS PER ND1002110 TYPE II USING 1010729-1
7. IDENTIFY WITH PART NO. PER ND 1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS .XX ± .03 .XXX ± .005 ANGLES ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN	R.J. Stango	12 Feb 66
CHECKED		22 Feb 66
APPROVED		
APPROVED		4/26/66
APPROVED MIT		4/26/66
APPROVED MSC		DATE

COVER, CONNECTOR

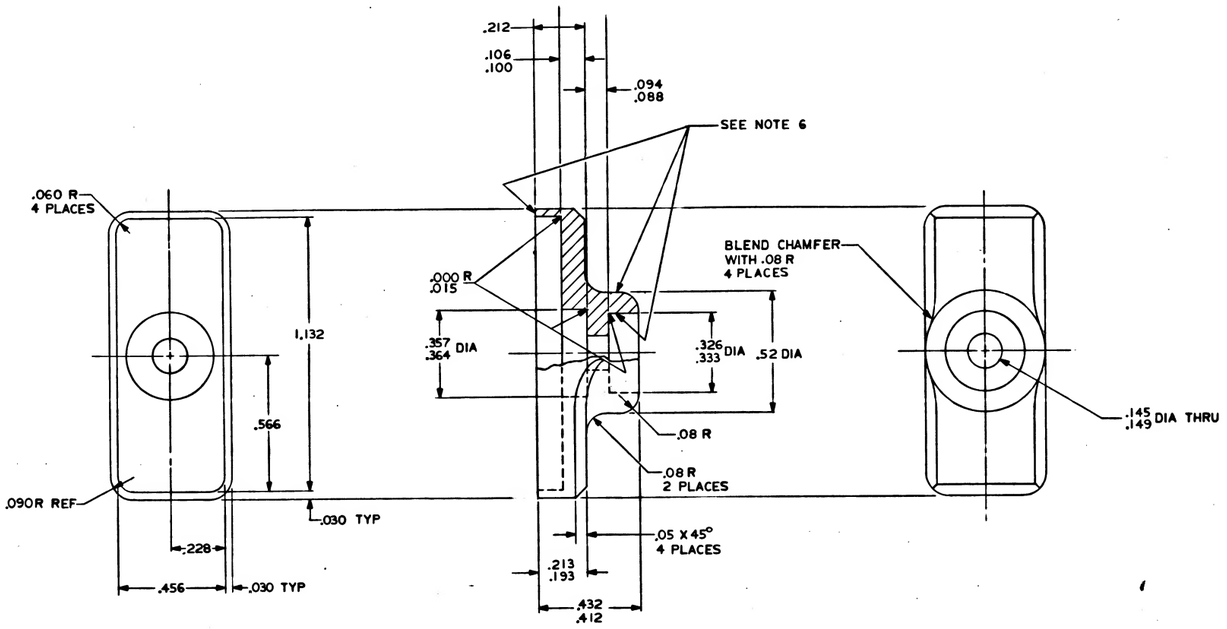
CODE IDENT NO.	SIZE	DRAWING NO.
80230	D	1008240

SCALE 4/1 SHEET 1 OF 1

1008240 A

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 22195						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: 6061-T6-AL PER QQ-A-250/11 TEMP 6
3. REMOVE BURRS AND SHARP EDGES .005/.015
4. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED
5. ANODIZE PER MIL-A-8625 TYPE II DYED BLACK
6. PAINT INDICATED AREAS PER ND 1002110 TYPE II USING 1010729-1
7. IDENTIFY WITH PART NO. PER ND 1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μF
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± — DECIMALS XX ± .02 XXX ± .015 ANGLES ± 2°
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT
INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN	R.Z. Rapp	9/16/65
CHECKED	[illegible]	9/24/65
APPROVED		
APPROVED	R.R. Ford	9/24/65
APPROVED MIT	[illegible]	10/6/65
APPROVED MSC	[illegible]	11/15

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

COVER, CONNECTOR

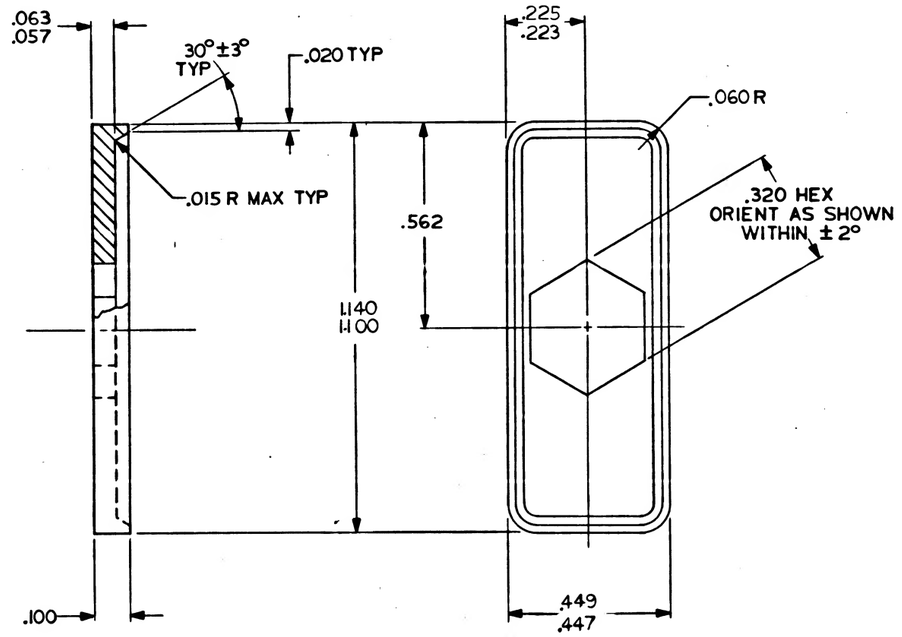
CODE IDENT NO.	SIZE	DRAWING NO.
80230	D	1008240

SCALE 4/1 — SHEET 1 OF 1

1008240

NOTICE – WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

REVISIONS 22195						
SYM	ZONE	DESCRIPTION	DR	CHK	DATE	APPROVED



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: SILICONE RUBBER PER MIL-R-5847 CLASS III GRADE 25
3. MOLDING FLASH NOT TO EXCEED .005
4. IDENTIFY WITH PART NO. PER ND1002019

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.

LIST OF MATERIALS

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± — XXX±.005 ± —
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT
INSTRUMENTATION LAB
CAMBRIDGE, MASS.

DRAWN R.Sloan 8 JULY '65
CHECKED R.Langelaan 8 JULY 65
APPROVED
APPROVED D.G.Hoag 8 July 65
APPROVED MIT W.Wilcox 8 July 65
APPROVED MSC W.Millard 7/15/65
DATE

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

GASKET – SEAL, CONNECTOR

CODE IDENT NO.	SIZE	DRAWING NO.
80230	C	1008241
SCALE 4/1		SHEET 1 OF 1

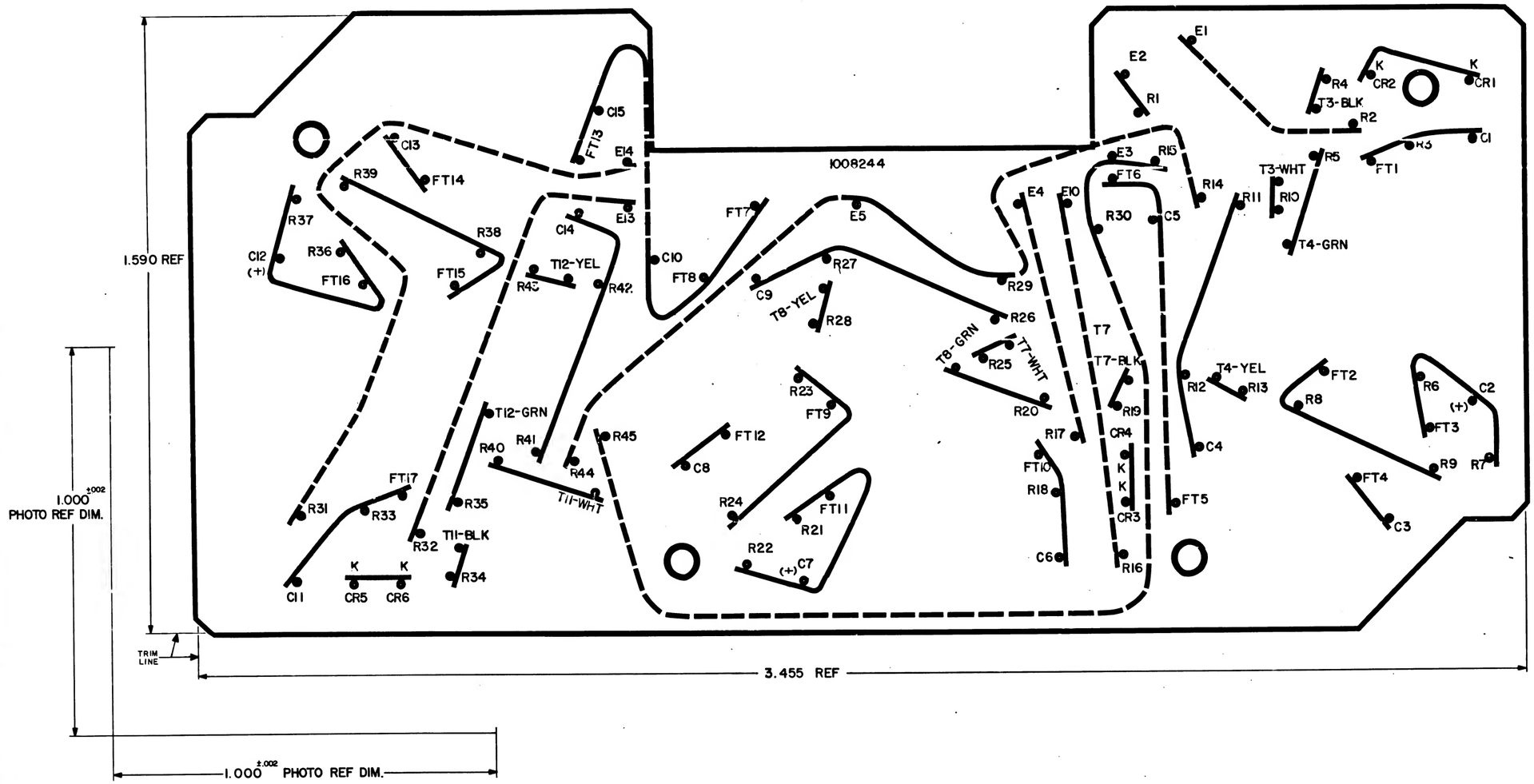
MASTER

1008241

D C B A

4 3 2 1

REVISIONS 2329			
SYM	DESCRIPTION	DATE	APPROVAL

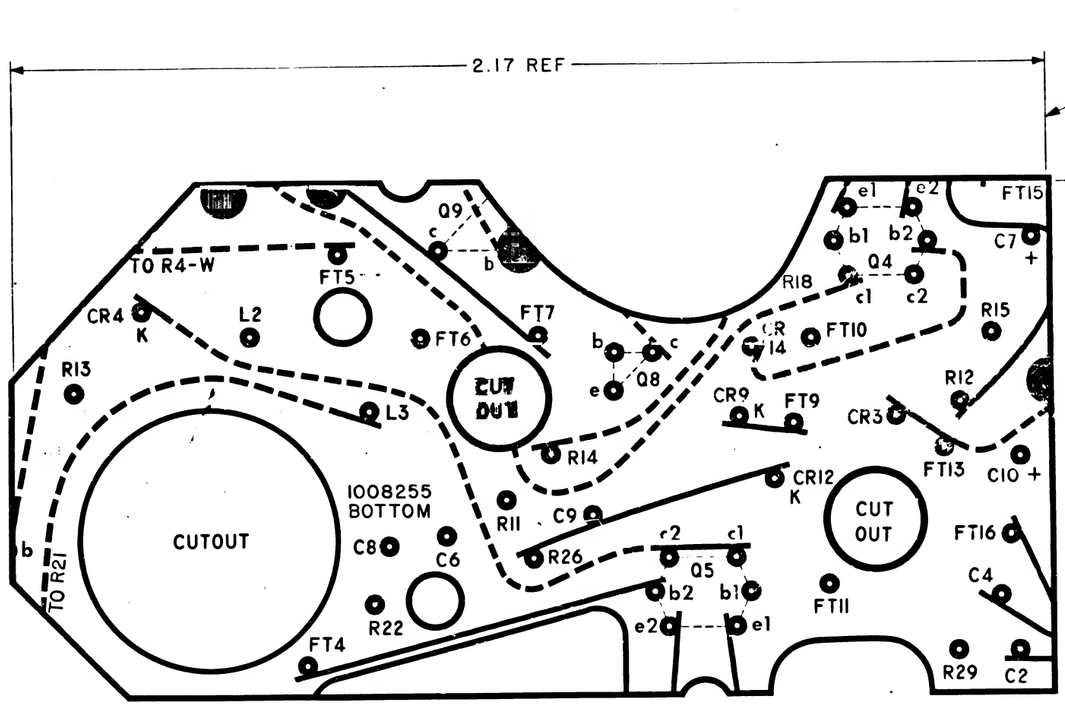


NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY A PROCESS OR METHOD SHALL INSURE DIMENSIONAL STABILITY.
3. MAKE MASTER PATTERN POSITIVE FILM TO DIMENSIONS SHOWN
4. CUT TO WITHIN .010 OF TRIM LINE

QTY REQD	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	FINC NO
LIST OF MATERIALS			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES DO NOT SCALE THIS DRAWING MATERIAL HEAT TREATMENT FINAL FINISH	M I T INSTRUMENTATION LAB Cambridge Mass.	MANNED SPACECRAFT CENTER HOUSTON TEXAS
NEXT ASSY USED ON APPLICATION	DRAWN W. Hungary DATE 12/27/67 CHECKED R.J. Josephson 7/28/68 APPROVAL [illegible] 2/19/68 APPROVAL [illegible]	PHOTOGRAPHIC MASTER WIRING BOARD BOTTOM SIGNAL CONDITIONER TORQUE MOTOR
NOT REQUIRED PER LETTER NASA MPT-65-612 MIT APPROVAL [illegible]	CODE IDENT NO 80230 SIZE E SCALE 10/1 WT	NASA DRAWING NO 1008244 SHEET 1 OF 1

A	REVISED PER TDRR 19306	15 JUL 64



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD, SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
5. MATERIAL: .006/.008 THICK PLASTIC SHEET SENSITIZED DIMENSIONALLY STABLE PER L-F-340 TYPE I SUBTYPE B, CLASS II, STYLE IA.
6. ⊙ .045/.050 DIA PUNCH ALL HOLES

1007516			INSULATOR PHOTOGRAPHIC MASTER - TERNARY CURRENT SWITCH COMPUTER OUTPUT
NEXT ASSY	USED ON		
APP. AT N		SEE NOTE 5	80230 E 1008255
			10:1 1 OF 1

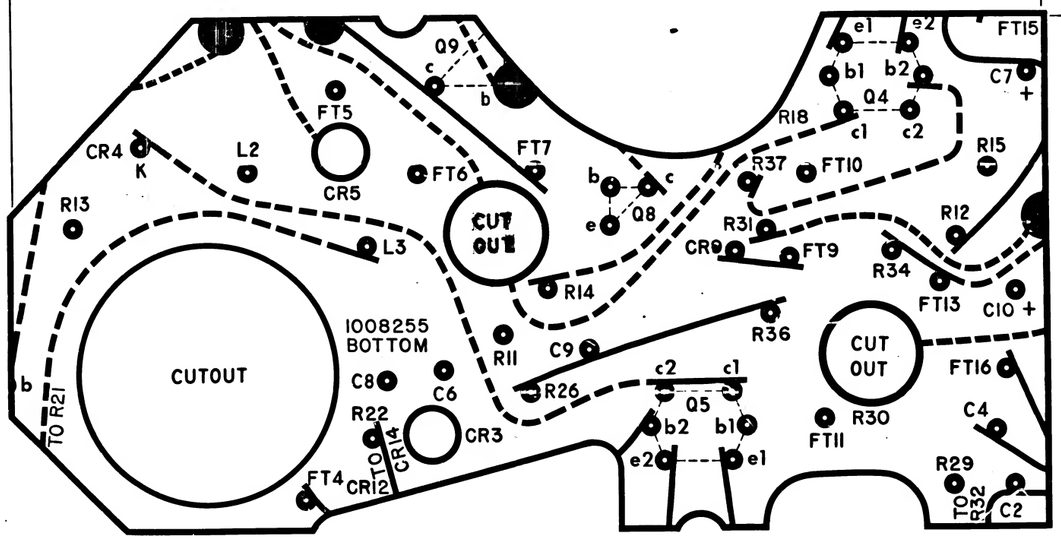
1008255 A

REVISIONS (LAST)					
LTR	DESCRIPTION	ECN NO.	DATE	APPD
A	REVISED PER TDRR 19506		15 JUL 65	A.N.
B	REVISED PER TDRR 22360		20 SEP 65	A.N.

8-4-65 WPE

TRIM LINE

2.17 REF



1.000 ± .002 PHOTO REF DIM.

1.000 ± .002 PHOTO REF DIM.

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD, SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
5. MATERIAL: .006/.008 THICK PLASTIC SHEET SENSITIZED DIMENSIONALLY STABLE PER L-F-340 TYPE I SUBTYPE B, CLASS II, STYLE IA.
6. ⊙ .045/.050 DIA PUNCH ALL HOLES

1007516 NEXT ASSY	USED ON APPLICATION	MATERIAL SEE NOTE 5	DO NOT SCALE THIS DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±

AC SPARK PLUG DIVISION, GMC MILWAUKEE WISCONSIN

DRAWN 29 JUN 64 MTT

CHECKED J.M. BATTRAM 1 DEC 64

APPROVAL

APPROVAL

NASA APPROVAL

MIT APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

INSULATOR PHOTOGRAPHIC MASTER

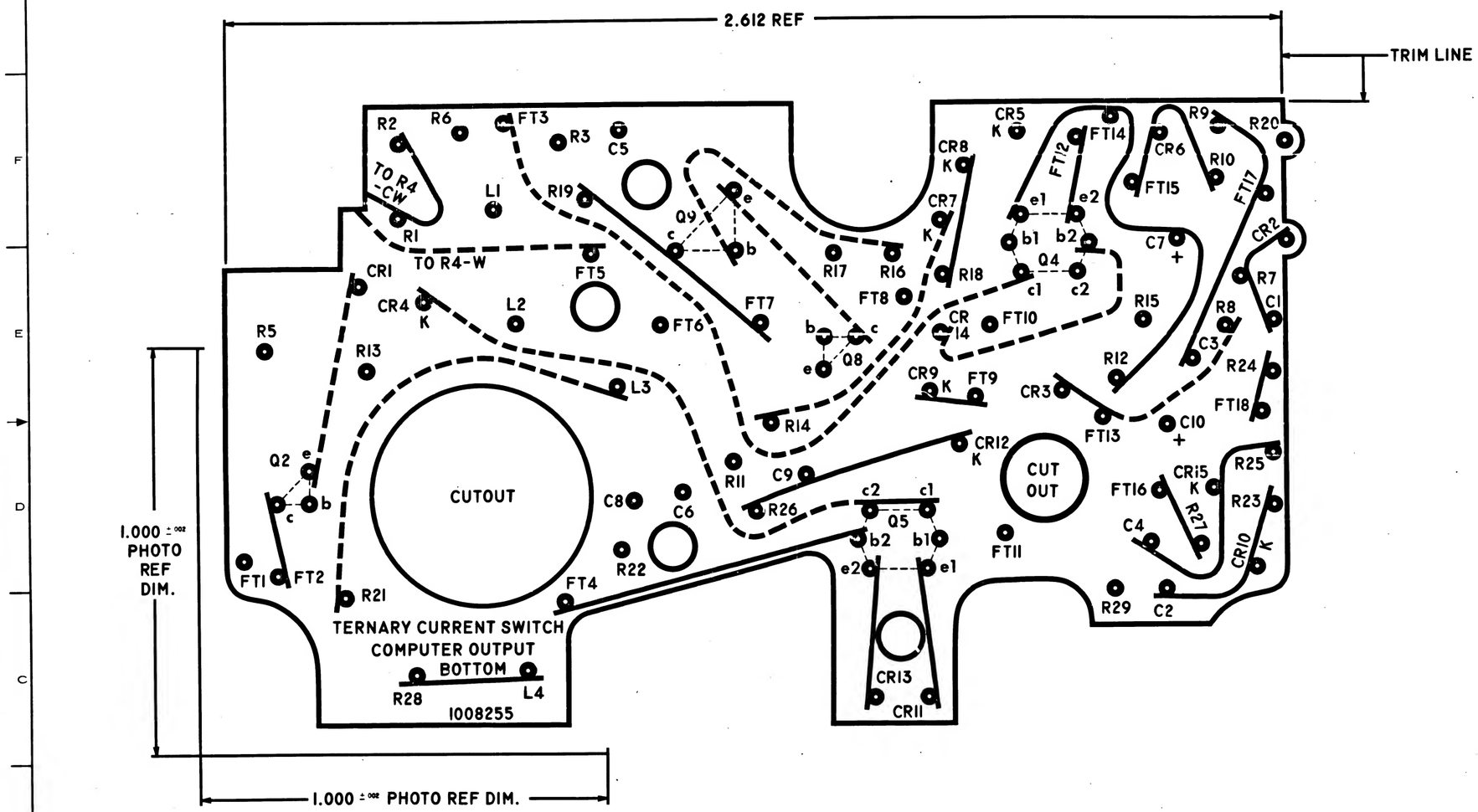
TERNARY CURRENT SWITCH-COMPUTER OUTPUT

DRAWING NO 80230 SIZE E 1008255

SCALE 10:1 SHEET 1 OF 1

1008255 B

REVISIONS 11701



NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. ORIGINAL OF THIS DRAWING OR REPRODUCTION MADE BY PROCESS OR METHOD, SHALL INSURE DIMENSIONAL STABILITY. DIMENSIONAL STABILITY SHALL NOT EXCEED .001 INCH PER INCH
3. CUT TO WITHIN .010 OF TRIM LINE
4. MAKE MASTER PATTERN POSITIVE FILMS TO DIMENSIONS SHOWN
5. MATERIAL: .006/.008 THICK PLASTIC SHEET SENSITIZED DIMENSIONALLY STABLE PER L-F-340 TYPE I SUBTYPE B, CLASS II, STYLE IA.
6. ⊙ .045/.050 DIA PUNCH ALL HOLES

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON	AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
		FRACTIONS DECIMALS ANGLES	APPROVED	INSULATOR PHOTOGRAPHIC MASTER
		+ — + — + —	DRAWN 29 JUN 64 DATE	TERNARY CURRENT SWITCH COMPUTER OUTPUT
		— — — — — —	CHECKED J.M. BATMAN 1 DEC 64	
		DO NOT SCALE THIS DRAWING	APPROVAL	
1007516		MATERIAL SEE NOTE 5	NASA APPROVAL	CON IDENT NO. E 1008255
NEXT ASSY	USED ON		MIT APPROVAL	SCALE 10:1 SHEET 1 OF 1
APPLICATION		CONTRACT NAS 9-4978		

PHOTOGRAPHIC SCALE ONLY

1008255

1008255

REVISIONS TLR# 19022						
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD	
A1		(A) REVISE PER DO 58912		28 JAN 65	GM	

SECTION D-D

.000 / .015 R MAX

.000 / .030 R

.12 R

.005 MAX ALLOWABLE STEP ABOVE SURFACE STEP BELOW SURFACE NOT PERMITTED -D-

.12 2 PLACES

.12 R

.100

.700 / .696

2.150 / 2.130

.748 / .746

30° TYP

GUTTER RADIUS

.135 / .115 TYP

.270 / .260

.125 MAX

-F-

.0003 MAX STEP BELOW ADJACENT SURFACE PERMITTED FOR SHADED AREA. STEP MAY NOT EXTEND TO LEFT OF SURFACE -F-

.385 / .365

.110 / .090

.000 / .015 R

1.570

32

.0005 IN/IN

.160

.710 / .690

.570

.100

.285

1.070 REF

.812

.618

1.625

1.237

.100 TYP

3.460

CUTOUT THRU

.140 DIA THRU .240 - .250 DIA SPOTFACE 2 HOLES

.015 R MAX PERMISSIBLE

GAGE POINT

.729

.220 / .218

30°

5° 0' ± 0° 15'

.040 / .060 TYP

30°

.477

30°

.040 / .060 BLEND WITH .12 R

5°

VIEW A
SCALE 2/1

.005 MAX ALLOWABLE STEP ABOVE -B- STEP BELOW SURFACE NOT PERMITTED BLEND .12 R WITH .000/.030 R

5 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 1.000 ± .002 TOLERANCE NON CUMULATIVE

.710 / .690

.094 R

13 EQUAL SPACES AT .200 ± .002 PITCH TOTAL 2.600 ± .002 TOLERANCE NON-CUMULATIVE

.040 / .060 X 45° ± 5° 2 PLACES BLEND WITH .12 R

.912

.625

.314 / .310

.878 / .872

.155 / .145

4-40 UNC-3B SEE NOTE 6

.137 / .139 DIA 84 HOLES

-B- I.C.004

.447 / .427

.330 / .310

.25 TYP

45° TYP

CUTOUT THRU

BREAK EDGE THIS SIDE .03

3.010 / 2.990

.000 / .030 R

32

-C-

.005

32

SEE VIEW A

.487 / .491 (FROM GAGE POINT)

.125

.062

.094

.12 3 PLACES

.12 R 2 PLACES

.005 MAX. ALLOWABLE STEP -E- ABOVE SURFACE. STEP BELOW SURFACE NOT PERMITTED

BREAK 2 EDGES THIS SIDE .03

CUTOUT THRU

.520 / .500

.030 R MAX PERMISSIBLE ONE PLACE ONLY

.385 / .365

1.000 / 1.020

.000 / .015 R

4.260 REF

3.700

.125 DIA X .19 DEEP 2 PLACES FOR MACHINING LOCATIONS

G .050

.094

G

.188

.570 / .550

.595 / .575 DIM FOR STEP ONLY.

.610 / .596

.062 X 45° TYP

.030 R

C B A E E A B C

.406

.812

.562

1.135 / 1.125

.813 / .811

1.625 / 1.623

1.070

2.150 REF / 2.130

.430 / .400

SECTION F-F

-D- -E-

SECTION G-G
SCALE 2/1

PART NO. AND OTHER PERMANENT MARKING FOR PROCESSING PERMITTED IN THIS AREA. ELECTRO-CHEMICAL ETCH .12 HIGH CHARACTERS. PER ND 1002019 LOCATE CENTRALLY

.729 REF

16.7195 / 16.7165 (FROM GAGE POINT)

17.488 / 17.468

.015 R MAX PERMISSIBLE

SECTION E-E

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MAT'L: ASTM NO. ZK60A-T5 MAGNESIUM ALLOY PER QQ-M-31A.
3. REMOVE BURRS AND BREAK SHARP EDGES .005 -.015.
4. UNLESS OTHERWISE SPECIFIED, FINISH 125.
5. ALL RADII AND FILLETS TO BE $^{.14}_{.10}$ UNLESS OTHERWISE SPECIFIED.
6. FINISH: ELECTROLESS NICKEL PLATE ALL OVER PER ND 1002198 DIMENSIONS AND FINISHES APPLY AFTER PLATING. PLUG THREADED HOLES DURING PLATING SPECIFIED THICKNESS NOT REQUIRED IN ALL HOLES AS LONG AS PLATING IS CONTINUOUS THROUGH EACH HOLE.
7. COAT THREADS OF (1) AND (2) USING (3).
8. MARK CHARACTERS BLACK PER ND 1002019 EXCEPT SURFACE D. AFTER PLATING ELECTRO-CHEMICAL ETCH PER ND 1002019 ALL CHARACTERS ON SURFACE D CENTRALIZE AS SHOWN.
9. PAINT PER ND 1002110 TYPE II USING 1010729-1 ALL SURFACES BETWEEN VIEWING PLANE END OF FRAME UNLESS OTHERWISE SPECIFIED. ALL HOLES TO BE FREE OF PAINT.
10. PAINT PER ND 1002110 TYPE II USING 1010729-3 CHARACTERS TO BE TYPE 1 CLASS 1 PER ND 1002122. CENTRALIZE AS SHOWN.
11. AFTER PLATING ROUGHENING OF THE SURFACES TO BE ENCAPSULATED IS PERMITTED. PLATING SURFACE MUST BE CONTINUOUS

.186 DIA / .180 CSK 100° X .230 / .210

.228 / .226

5° 0' ± 0° 15'

SECTION A-A
2 PLACES

.248

(2)

.165 / .165 DIA THRU

10-32UNF-2B THRU

82° ± 1° CSK. .189 / .199 DIA

.005 DIA

SEE NOTES 6 & 7

SECTION B-B
2 PLACES

.272 DIA C'BORE .406 DIA X .142 DEEP

.281

.250 / .246

5°

.245

5°

.015 R MAX PERMISSIBLE

SECTION C-C

ITEM NO.	NO. REQD	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
3	AR	MIL-P-8585	ZINC CHROMATE PRIMER
2	2	1000115-2	INSERT, THREADED, SELF-LOCKING
1	1	1008257-001	FRAME

LIST OF PARTS AND MATERIALS

1007258	
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± .02, DECIMALS ± .005, ANGLES ± 0°30'. DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

CONTRACT NAS 9-497

MC SPARK PLUG DIVISION, GMC, MILWAUKEE, WISCONSIN

ACSP PN

DRAWN C.M. Miller 21 OCT 64

CHECKED R. Wilcox 26 OCT 64

APPROVAL Chris Jones 26 OCT 64

APPROVAL L. Bell 29 OCT 64

NASA APPROVAL 5-Dec-64

MIT APPROVAL 12 Nov 65

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME
INSEPARABLE ASSEMBLY
TRAY 10

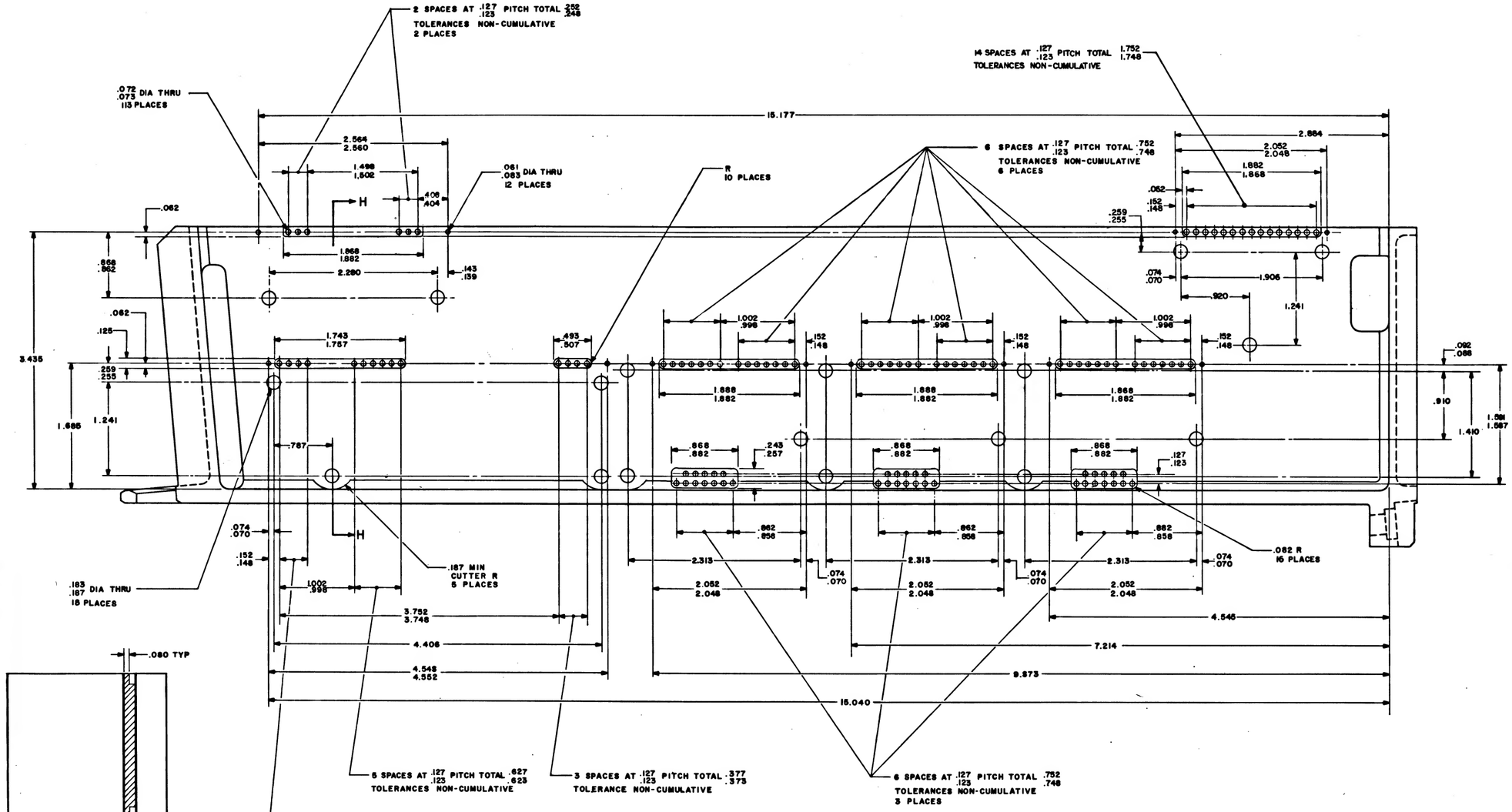
CODE IDENT NO. | SIZE E | 1008257

SCALE FULL | SHEET 1 OF 3

1008257 A

1008257 B

REVISIONS TDR 19232					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.
A		(A) REVISED PER JO 58912		14 OCT 65	GM 27



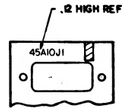
VIEW B-B
SCALE: 2:1

SECTION H-H

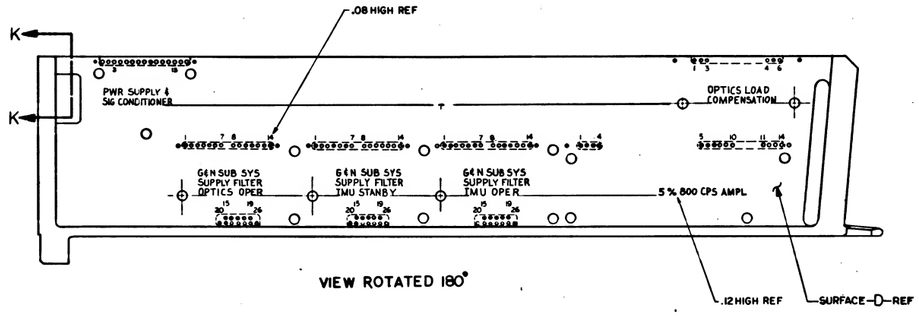
NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± — DECIMALS ± — ANGLES ± —	AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
APPLICATION		DO NOT SCALE THIS DRAWING	ACSP PN	FRAME, INSEPARABLE ASSEMBLY TRAY 10
		MATERIAL —	DRAWN C.M. Kuhn 8 Aug 64 DATE	
		CONTRACT NAS 9 - 497	CHECKED R. Ulrich 8 Aug 64	CODE IDENT NO. SIZE E 1008257
			APPROVAL R. Nelson 24 Aug 64	
			APPROVAL D. Hart 8 Aug 64	
			NASA APPROVAL W. J. Ott 5-12-65	SCALE 2:1 SHEET 2 OF 3
			MIT APPROVAL W. Hayes 5-14-65	

1008257 A

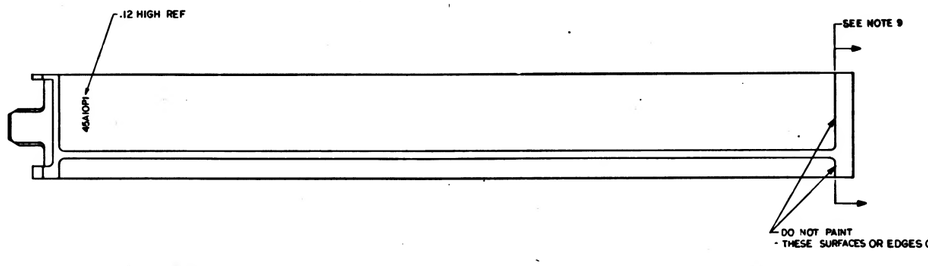
REVISIONS TLR 19032					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD
A		(A) REVISED PER DCS6912		12 JAN 65	VN 1/7

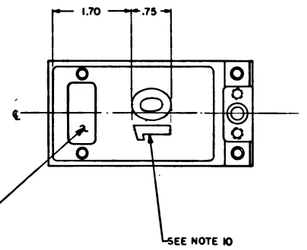


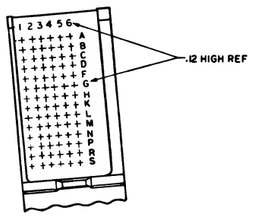
PARTIAL SECTION K-K

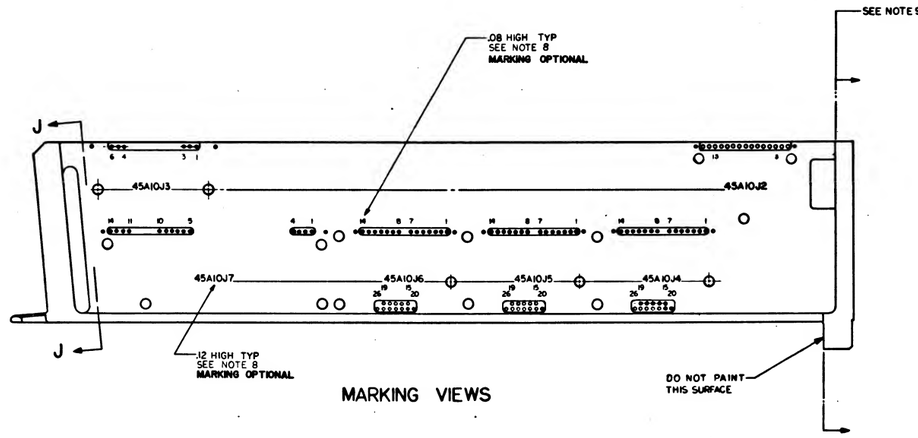


VIEW ROTATED 180°

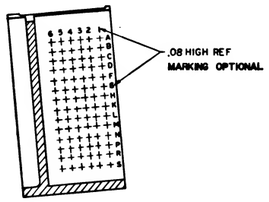








MARKING VIEWS



SECTION J-J

NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ± DO NOT SCALE THIS DRAWING	AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN	MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
APPLICATION		MATERIAL —	ACSP PN	FRAME, INSEPARABLE ASSEMBLY TRAY 10	
		CONTRACT NAS9-497	DRAWN 11 Nov 64 DATE	CODE IDENT NO.	SIZE E 1008257
			CHECKED 11 Nov 64	SCALE FULL	SHEET 3 OF 3
			APPROVAL 11 Aug 64		
			APPROVAL 11 Dec 64		
			NASA APPROVAL 5-12-65		
			MIT APPROVAL 12 May 65		

1 of 1

1 of 1

REVISIONS TDE2/19032

DESCRIPTION	DATE	APPROVAL
(A) REVISED PER DO 58912	22 JAN 65	GM

APPLICATION NEXT ASSY	APPLICATION USED ON	S:M
1007258-021	1007256-01 1007256-01	A1

REV A A A A A A A A A A A
SHEET 1 2 3 4 5 6 7 8 9

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

WIRE LIST AA
TRAY 10

DRAWN R.M. Kelly 22 JUN 64
CHECKED L. Ulmer 25 AUG 64
APPROVAL R. Deitz 26 AUG 64
APPROVAL J. Green 8/31/65

CODE IDENT NO. 80009
SIZE A
1008260

NASA APPROVAL W.H. Hall 12 Aug 65
MIT APPROVAL W.H. Hall 12 Aug 65

CONTRACT NAS9-497

REV A
SHEET 1 OF 9
SCALE —

GQX — WIRE LIST AA — A — 1008260

PENNANT NOTE — GENERAL NOTES

1. SEE CONDUCTOR CHART, PENNANT NOTE 1.
2. SEE CONDUCTOR CHART, PENNANT NOTE 2.
3. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4. MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5. SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6. SPIRALLING OF THE MARKING IS ALLOWED.
7. SOLDER PER ND1002071 USING ITEMS 6 AND 7 OR 8.
8. LENGTHS SPECIFIED ARE FOR CONDUCTORS BEFORE ATTACHING TO AN ACCESSORY.
9. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
10. INSTALL ITEM 3 PER ND1002206
11. ASSEMBLE PER ND1002032

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR A	SHEET 2 OF 9

MIL 2084 4-63

GQX — WIRE LIST AA — + — 1008260

PENNANT NOTE — GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR +	SHEET 3 OF 9

MIL 2084 4-63

GQX — WIRE LIST AA — A — 1008260

PENNANT NOTE — LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1006757- 9	WIRE 15 INCHES TOTAL LENGTH
9	2	AR	1010848- 4	WIRE 3 INCHES TOTAL LENGTH
9	3	1	MS25036- 44	TERMINAL, LUG
9	4	AR	1010848- 2	WIRE 2 INCHES TOTAL LENGTH
9	5	AR	1010847- 4	WIRE 1 INCHES TOTAL LENGTH
	6	AR	SN60WS	SOLDER QQ-S-571 (ES2175-1)
	7	AR	MIL-F-14256	TYPE A OR W FLUX (ES2798)
	8	AR	SN60WRAP	SOLDER QQ-S-571 (ES2175-3)

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR A	SHEET 4 OF 9

MIL 2084 4-63

APPLICATION		REVISIONS TDRR 19032			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
1007258-011 1007258-021	1007256-011 1007256-021	A,	(A) REVISED PER DO 58912	22 JAN 65	GM
		A	REPLACED WITH CHANGE BY REV B PER TDRR 30602	19 AUG 66	DMA

SUPERSEDED

REV STATUS	REV	A	A	✓	A	✓	✓	✓	✓	✓
OF SHEETS	SHEET	1	2	3	4	5	6	7	8	9

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN C. M. Kuba DATE 29 JUL 64
CHECKED A. Wovich 25 AUG 64
APPROVAL [illegible] 26 AUG 64
APPROVAL [illegible]

WIRE LIST AA
TRAY 10

NASA APPROVAL [illegible] 5-12-65
MIT APPROVAL [illegible] 12 May 65

CODE IDENT NO.

SIZE A

1008260

REV A

CONTRACT NAS9-497

SCALE —

SHEET 1 OF 9

GQX — WIRE LIST AA — 1008260

CONDUCTOR NUMBER	ITEM NO.	▷2	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.
AA 1	2	27	45A10J7-14	20N			45A10P1-G 1	20N		
AA 2	1	25	45A10J7- 6				45A10J7- 5			
AA 3	1	25	45A10J7- 4				45A10J7- 3			
AA 4	1	25	45A10J7- 2				45A10J7- 1			
AA 5	1	87	45A10J6-14				45A10J6-13			
			45A10J6-13				45A10J6-12			
			45A10J6-12				45A10J6-11			
			45A10J6-11				45A10J6-10			
			45A10J6-10				45A10J6- 9			
			45A10J6- 9				45A10J6- 8			
AA 6	1	87	45A10J6-26				45A10J6-25			
			45A10J6-25				45A10J6-24			
			45A10J6-24				45A10J6-23			
			45A10J6-23				45A10J6-22			
			45A10J6-22				45A10J6-21			
			45A10J6-21				45A10J6-20			
AA 7	1	25	45A10J7-14				45A10J7-13			
AA 8	1	87	45A10J6- 7				45A10J6- 6			

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260 | SCALE-NONE | REV LTR + | SHEET 5 OF 9

MIL 2089 - 4-65 WIR

GQX — WIRE LIST AA — 1008260

CONDUCTOR NUMBER	ITEM NO.	▷2	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.
			45A10J6- 6				45A10J6- 5			
			45A10J6- 5				45A10J6- 4			
			45A10J6- 4				45A10J6- 3			
			45A10J6- 3				45A10J6- 2			
			45A10J6- 2				45A10J6- 1			
AA 9	1	87	45A10J5-14				45A10J5-13			
			45A10J5-13				45A10J5-12			
		+	45A10J5-12				45A10J5-11			
			45A10J5-11				45A10J5-10			
			45A10J5-10				45A10J5- 9			
			45A10J5- 9				45A10J5- 8			
AA 10	1	87	45A10J5-26				45A10J5-25			
			45A10J5-25				45A10J5-24			
			45A10J5-24				45A10J5-23			
			45A10J5-23				45A10J5-22			
			45A10J5-22				45A10J5-21			
			45A10J5-21				45A10J5-20			
AA 11	1	87	45A10J5- 7				45A10J5- 6			

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260 | SCALE-NONE | REV LTR + | SHEET 6 OF 9

MIL 2089 - 4-65 WIR

GQX — WIRE LIST AA — 1008260

CONDUCTOR NUMBER	ITEM NO.	▷2	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.
			45A10J5- 6				45A10J5- 5			
			45A10J5- 5				45A10J5- 4			
			45A10J5- 4				45A10J5- 3			
			45A10J5- 3				45A10J5- 2			
			45A10J5- 2				45A10J5- 1			
AA 12	1	87	45A10J4-14				45A10J4-13			
			45A10J4-13				45A10J4-12			
			45A10J4-12				45A10J4-11			
			45A10J4-11				45A10J4-10			
			45A10J4-10				45A10J4- 9			
			45A10J4- 9				45A10J4- 8			
AA 13	1	87	45A10J4- 7				45A10J4- 6			
			45A10J4- 6				45A10J4- 5			
			45A10J4- 5				45A10J4- 4			
			45A10J4- 4				45A10J4- 3			
			45A10J4- 3				45A10J4- 2			
			45A10J4- 2				45A10J4- 1			
AA 14	1	87	45A10J4-26				45A10J4-25			

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260 | SCALE-NONE | REV LTR + | SHEET 7 OF 9

MIL 2089 - 4-65 WIR

GQX — WIRE LIST AA — 1008260

CONDUCTOR NUMBER	ITEM NO.	▷2	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT ▷2	T I N ▷2	TERMINATION SPEC ▷1 / ITEM NO.	NO.
			45A10J4-25				45A10J4-24			
			45A10J4-24				45A10J4-23			
			45A10J4-23				45A10J4-22			
			45A10J4-22				45A10J4-21			
			45A10J4-21				45A10J4-20			
AA 15	1	25	45A10P1-G 6				45A10P1-H 6			
AA 16	1	25	45A10P1-G 5				45A10P1-H 5			
AA 17	1	68	45A10P1-S 2				45A10P1-R 2			
			45A10P1-R 2				45A10P1-P 2			
			45A10P1-P 2				45A10P1-N 2			
AA 18	1	50	45A10P1-M 1				45A10P1-L 1			
			45A10P1-L 1				45A10P1-K 1			
AA 19	1	25	45A10P1-R 4				45A10P1-S 4			
AA 20	1	30	45A10P1-G 1				45A10P1-H 1			
AA 21	1	68	45A10P1-S 1				45A10P1-R 1			
			45A10P1-R 1				45A10P1-P 1			
			45A10P1-P 1				45A10P1-N 1			
AA 22	4	20	45A10P1-G 4	20N			45A10E1	20N	3	

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260 | SCALE-NONE | REV LTR + | SHEET 8 OF 9

MIL 2089 - 4-65 WIR

PENNANT NOTE | GENERAL NOTES

1 SEE CONDUCTOR CHART, PENNANT NOTE 1.

2 SEE CONDUCTOR CHART, PENNANT NOTE 2.

3 INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.

4 MARK CONDUCTOR IDENTIFICATION PER ND1002019.

5 SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.

6 SPIRALLING OF THE MARKING IS ALLOWED.

7 SOLDER PER ND1002071 USING ITEMS 6 AND 7 OR 8.

8 LENGTHS SPECIFIED ARE FOR CONDUCTORS BEFORE ATTACHING TO AN ACCESSORY.

9 VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.

10 INSTALL ITEM 3 PER ND1002206

11 ASSEMBLE PER ND1002032

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR A	SHEET 2 OF 9

MIL 2088 4-63

PENNANT NOTE | GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE				
	WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR +	SHEET 3 OF 9

MIL 2088 4-63

PENNANT NOTE | LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1006757- 9	WIRE 15 INCHES TOTAL LENGTH
9	2	AR	1010848- 4	WIRE 3 INCHES TOTAL LENGTH
9	3	1	MS25036- 44	TERMINAL, LUG
9	4	AR	1010848- 2	WIRE 2 INCHES TOTAL LENGTH
9	5	AR	1010847- 4	WIRE 1 INCHES TOTAL LENGTH
	6	AR	SN60WS	SOLDER QQ-S-571 (ES2175-1)
	7	AR	MIL-F-14256	TYPE A OR W FLUX (ES2798)
	8	AR	SN60WRAP	SOLDER QQ-S-571 (ES2175-3)

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR A	SHEET 4 OF 9

MIL 2088 4-63

CONDUCTOR NUMBER	ITEM NO.	INDIVIDUAL LENGTH 2	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET - CIRCUIT POINT 2	FROM: T I N 3	FROM: TERMINATION SPEC. 1 ITEM NO.	FROM: NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT 2	TO: T I N 3	TO: TERMINATION SPEC 1 ITEM NO.	TO: NO.
AA 1	2	275	45A10J7-14	20N			45A10P1-G 1	20N		
AA 2	1	254	45A10J7- 6				45A10J7- 5			
AA 3	1	254	45A10J7- 4				45A10J7- 3			
AA 4	1	254	45A10J7- 2				45A10J7- 1			
AA 5	1	87	45A10J6-14				45A10J6-13			
			45A10J6-13				45A10J6-12			
			45A10J6-12				45A10J6-11			
			45A10J6-11				45A10J6-10			
			45A10J6-10				45A10J6- 9			
			45A10J6- 9				45A10J6- 8			
AA 6	1	87	45A10J6-26				45A10J6-25			
			45A10J6-25				45A10J6-24			
			45A10J6-24				45A10J6-23			
			45A10J6-23				45A10J6-22			
			45A10J6-22				45A10J6-21			
			45A10J6-21				45A10J6-20			
AA 7	1	254	45A10J7-14				45A10J7-13			
AA 8	1	87	45A10J6- 7				45A10J6- 6			

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER

2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008260
SCALE-NONE	REV LTR +	SHEET 5 OF 9

MIL 2088 - 4-63 WIR

GQX

WIRE LIST AA

1008260

CONDUCTOR NUMBER	INDIVIDUAL LENGTH ITEM NO.	3	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT 2	TIN	3	TERMINATION SPEC. 1 ITEM NO.	NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT 2	TIN	3	TERMINATION SPEC 1 ITEM NO.	NO.
AA 23	1	25	45A10P1-P 3					45A10P1-P 4				
AA 24	1	25	45A10P1-R 3					45A10P1-S 3				
AA 25	1	43	45A10P1-P 6					45A10P1-R 6				
			45A10P1-R 6					45A10P1-S 6				
AA 26	1	43	45A10P1-P 5					45A10P1-R 5				
			45A10P1-R 5					45A10P1-S 5				
AA 27	1	25	45A10P1-N 3					45A10P1-N 4				
AA 28	1	25	45A10P1-L 5					45A10P1-M 5				
AA 29	5	31	45A10J4-17					45A10J4-18				
			45A10J4-18					45A10J4-19				
AA 30	5	31	45A10J5-17					45A10J5-18				
			45A10J5-18					45A10J5-19				
AA 31	5	31	45A10J6-19					45A10J6-18				
			45A10J6-18					45A10J6-17				
AA 32	1	30	45A10P1-L 2					45A10P1-L 1				
AA 33	1	50	45A10P1-M 2					45A10P1-L 2				
			45A10P1-L 2					45A10P1-K 2				
AA 34	1	30	45A10P1-H 1					45A10P1-H 2				

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER

2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIZE A

1008260

SCALE - NONE | REV LTR + | SHEET 9 OF 9

MIL 2088 - 4-63 WIR

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.
		45A10J6- 6			45A10J6- 5		
		45A10J6- 5			45A10J6- 4		
		45A10J6- 4			45A10J6- 3		
		45A10J6- 3			45A10J6- 2		
		45A10J6- 2			45A10J6- 1		
AA 9	1	87 45A10J5-14			45A10J5-13		
		45A10J5-13			45A10J5-12		
		45A10J5-12			45A10J5-11		
		45A10J5-11			45A10J5-10		
		45A10J5-10			45A10J5- 9		
		45A10J5- 9			45A10J5- 8		
AA 10	1	87 45A10J5-26			45A10J5-25		
		45A10J5-25			45A10J5-24		
		45A10J5-24			45A10J5-23		
		45A10J5-23			45A10J5-22		
		45A10J5-22			45A10J5-21		
		45A10J5-21			45A10J5-20		
AA 11	1	87 45A10J5- 7			45A10J5- 6		

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260

SCALE - NONE | REV LTR + | SHEET 6 OF 9

MIL 2065 - 4-63 WIR

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.
		45A10J5- 6			45A10J5- 5		
		45A10J5- 5			45A10J5- 4		
		45A10J5- 4			45A10J5- 3		
		45A10J5- 3			45A10J5- 2		
		45A10J5- 2			45A10J5- 1		
AA 12	1	87 45A10J4-14			45A10J4-13		
		45A10J4-13			45A10J4-12		
		45A10J4-12			45A10J4-11		
		45A10J4-11			45A10J4-10		
		45A10J4-10			45A10J4- 9		
		45A10J4- 9			45A10J4- 8		
AA 13	1	87 45A10J4- 7			45A10J4- 6		
		45A10J4- 6			45A10J4- 5		
		45A10J4- 5			45A10J4- 4		
		45A10J4- 4			45A10J4- 3		
		45A10J4- 3			45A10J4- 2		
		45A10J4- 2			45A10J4- 1		
AA 14	1	87 45A10J4-26			45A10J4-25		

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260

SCALE - NONE | REV LTR + | SHEET 7 OF 9

MIL 2065 - 4-63 WIR

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.
		45A10J4-25			45A10J4-24		
		45A10J4-24			45A10J4-23		
		45A10J4-23			45A10J4-22		
		45A10J4-22			45A10J4-21		
		45A10J4-21			45A10J4-20		
AA 15	1	25 45A10P1-G 6			45A10P1-H 6		
AA 16	1	25 45A10P1-G 5			45A10P1-H 5		
AA 17	1	68 45A10P1-S 2			45A10P1-R 2		
		45A10P1-R 2			45A10P1-P 2		
		45A10P1-P 2			45A10P1-N 2		
AA 18	1	50 45A10P1-M 1			45A10P1-L 1		
		45A10P1-L 1			45A10P1-K 1		
AA 19	1	25 45A10P1-R 4			45A10P1-S 4		
AA 20	1	30 45A10P1-G 1			45A10P1-H 1		
AA 21	1	68 45A10P1-S 1			45A10P1-R 1		
		45A10P1-R 1			45A10P1-P 1		
		45A10P1-P 1			45A10P1-N 1		
AA 22	4	200 45A10P1-G 4	20N		45A10E1	20N	3

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260

SCALE - NONE | REV LTR + | SHEET 8 OF 9

MIL 2065 - 4-63 WIR

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TIN	TERMINATION SPEC. NO. / ITEM NO.
AA 23	1	25 45A10P1-P 3			45A10P1-P 4		
AA 24	1	25 45A10P1-R 3			45A10P1-S 3		
AA 25	1	43 45A10P1-P 6			45A10P1-R 6		
		45A10P1-R 6			45A10P1-S 6		
AA 26	1	43 45A10P1-P 5			45A10P1-R 5		
		45A10P1-R 5			45A10P1-S 5		
AA 27	1	25 45A10P1-N 3			45A10P1-N 4		
AA 28	1	25 45A10P1-L 5			45A10P1-M 5		
AA 29	5	31 45A10J4-17			45A10J4-18		
		45A10J4-18			45A10J4-19		
AA 30	5	31 45A10J5-17			45A10J5-18		
		45A10J5-18			45A10J5-19		
AA 31	5	31 45A10J6-19			45A10J6-18		
		45A10J6-18			45A10J6-17		
AA 32	1	30 45A10P1-L 2			45A10P1-L 1		
AA 33	1	50 45A10P1-M 2			45A10P1-L 2		
		45A10P1-L 2			45A10P1-K 2		
AA 34	1	30 45A10P1-H 1			45A10P1-H 2		

1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008260

SCALE - NONE | REV LTR + | SHEET 9 OF 9

MIL 2065 - 4-63 WIR

APPLICATION	
NEXT ASSY	USED ON
1007149	1007159

REVISIONS 14083			
SYM	DESCRIPTION	DATE	APPROVAL
A	REPLACED WITH CHANGE BY REV (B) PER TDRR 23191	18 OCT 65	RLP / T.M.

Ⓐ REPLACED WITH CHANGE BY REV Ⓑ

Charles... 5 OCT 64

REV STATUS OF SHEETS							
REV	A	+	+	+	+	+	+
SHEET	1	2	3	4	5	6	7

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

ACSP PN

DRAWN J. Wolski DATE 9 SEP 64
CHECKED O.A. ... 28 SEP 64
APPROVAL R.P. ... 5 OCT 64
APPROVAL D.R. ...

WIRING HARNESS "A"
(TRAY 9)

NASA APPROVAL W.J. ...
MIT APPROVAL ... 16 MAY ...

CODE IDENT NO. | SIZE A | 1008261 | REV A

CONTRACT NAS 9-497 | SCALE NONE | SHEET 1 OF 7

PENNANT NOTE | GENERAL NOTES

1 SEE CONDUCTOR CHART, PENNANT NOTE 1.

2 SEE CONDUCTOR CHART, PENNANT NOTE 2.

3 INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.

4 MARK CONDUCTOR IDENTIFICATION PER ND1002019.

5 SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.

6 SPIRALLING OF THE MARKING IS ALLOWED.

7 LACE HARNESS USING ITEM 2.

8 IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).

9 Y OR N IN TINNED COLUMN INDICATES YES OR NO.

10 GRID MODULE IS 1 INCH.

11 UNLESS OTHERWISE SPECIFIED ---
FEATURE CENTERLINES ARE LOCATED WITHIN + OR - .12 INCH. END OF HOOKUP WIRES OR ACCESSORIES ARE LOCATED WITHIN + OR - .06 INCH.

12 BREAKOUTS OF INDIVIDUAL OR GROUPS OF CONDUCTORS ARE MINIMUM CONFIGURATION.

13 VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.

14 IN CONDUCTOR CHART CONDUCTOR LENGTHS ARE FOR REFERENCE ONLY

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008261
SCALE - NONE	REV LTR +	SHEET 2 OF 7

MIL 2084 4-63

PENNANT NOTE | GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET		+.50-.50	+.50-.50	+.50-.50

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008261
SCALE - NONE	REV LTR +	SHEET 3 OF 7

MIL 2084 4-63

PENNANT NOTE | LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
13	1	1	1010639- 2	WIRE 16 FT. 10.8 IN. TOTAL LENGTH
	2	AR	MIL-T-713	LACING TAPE TYPE P CLASS 2 BLACK (ES-2732 NO. 18)

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008261
SCALE - NONE	REV LTR +	SHEET 4 OF 7

MIL 2084 4-63

APPLICATION

NEXT ASSY	USED ON
1007149	1007159

REVISIONS 1403

SYM	DESCRIPTION	DATE	APPROVAL
	-		

REV								
SHEET								
REV STATUS	+	+	+	+	+	+	+	+
OF SHEETS	1	2	3	4	5	6	7	

Checked 5 OCT 64

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

DRAWN J. Wagner DATE 9 SEP 64
CHECKED [illegible] 28 SEP 64
APPROVAL [illegible] 5 OCT 64
APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS 'A'
(TRAY 9)

NASA APPROVAL [illegible] 4-11-65
MIT APPROVAL [illegible] 11 MAY 65

REV	CODE IDENT NO.	SIZE	
	1008261	A	

SCALE NONE	SHEET 1 OF 7

CONTRACT NAS 9-497

INCHES 0 1 2

DIGITIZE GRAPHICS SCALE 0.5

GRW

WIRING HARNESS A

1008261

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
A 1	1	870	45A9P1-A 1	20N		26	45A9J3-A 5	20N		37
A 2	1	880	45A9P1-A 3	20N		25	45A9J3-A 8	20N		38
A 3	1	1080	45A9P1-A 5	20N		23	45A9J4- 9	20N		50
A 4	1	840	45A9P1-A 9	20N		22	45A9J3-A13	20N		42
A 5	1	1090	45A9P1-B 2	20N		21	45A9J4- 4	20N		48
A 6	1	1240	45A9P1-B 4	20N		20	45A9J2-B23	20N		55
A 7	1	1160	45A9P1-B 5	20N		19	45A9J4-10	20N		51
A 8	1	850	45A9P1-B 7	20N		18	45A9J3-A10	20N		40
A 9	1	870	45A9P1-B 8	20N		17	45A9J3-A12	20N		41
A 10	1	910	45A9P1-B 9	20N		16	45A9J3-A15	20N		44
A 11	1	1160	45A9P1-C 2	20N		14	45A9J2-B24	20N		54
A 12	1	970	45A9P1-C 8	20N		13	45A9J3-A16	20N		45
A 13	1	1120	45A9P1-D 1	20N		12	45A9J4- 3	20N		47
A 14	1	920	45A9P1-D 8	20N		11	45A9J3-A14	20N		43
A 15	1	520	45A9P1-F 5	20N		10	45A9J2-A 6	20N		28
A 16	1	500	45A9P1-F 6	20N		9	45A9J2-A 1	20N		27
A 17	1	680	45A9P1-F 8	20N		8	45A9J2-A22	20N		32
A 18	1	650	45A9P1-F 9	20N		7	45A9J2-A20	20N		31

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008261

SCALE - NONE | REV LTR + | SHEET 5 OF 7

MIL 2088 - 4-65 WIR

GRW

WIRING HARNESS A

1008261

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
A 19	1	620	45A9P1-G 1	20N		6	45A9J2-A15	20N		30
A 20	1	640	45A9P1-G 5	20N		5	45A9J2-A26	20N		35
A 21	1	640	45A9P1-G 6	20N		4	45A9J2-A27	20N		36
A 22	1	600	45A9P1-H 1	20N		3	45A9J2-A13	20N		29
A 23	1	690	45A9P1-H 5	20N		2	45A9J2-A24	20N		33
A 24	1	640	45A9P1-H 6	20N		1	45A9J2-A25	20N		34
A 25	1	140	45A9J2-A20	20N		31	45A9J2-A26	20N		35
A 26	1		45A9P1-A 4	20N		24	45A9J2-B27	20N		53
A 27	1		45A9P1-C 1	20N		15	45A9J2-B21	20N		56
A 28	1		45A9J2-B23	20N		55	45A9J4-14	20N		52
A 29	1		45A9J2-B24	20N		54	45A9J4- 8	20N		49
A 30	1		45A9P1-B 6	20N		18A	45A9J3-A11	20N		39
A 31	1		45A9P1-D 9	20N		10A	45A9J3-A17	20N		46

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

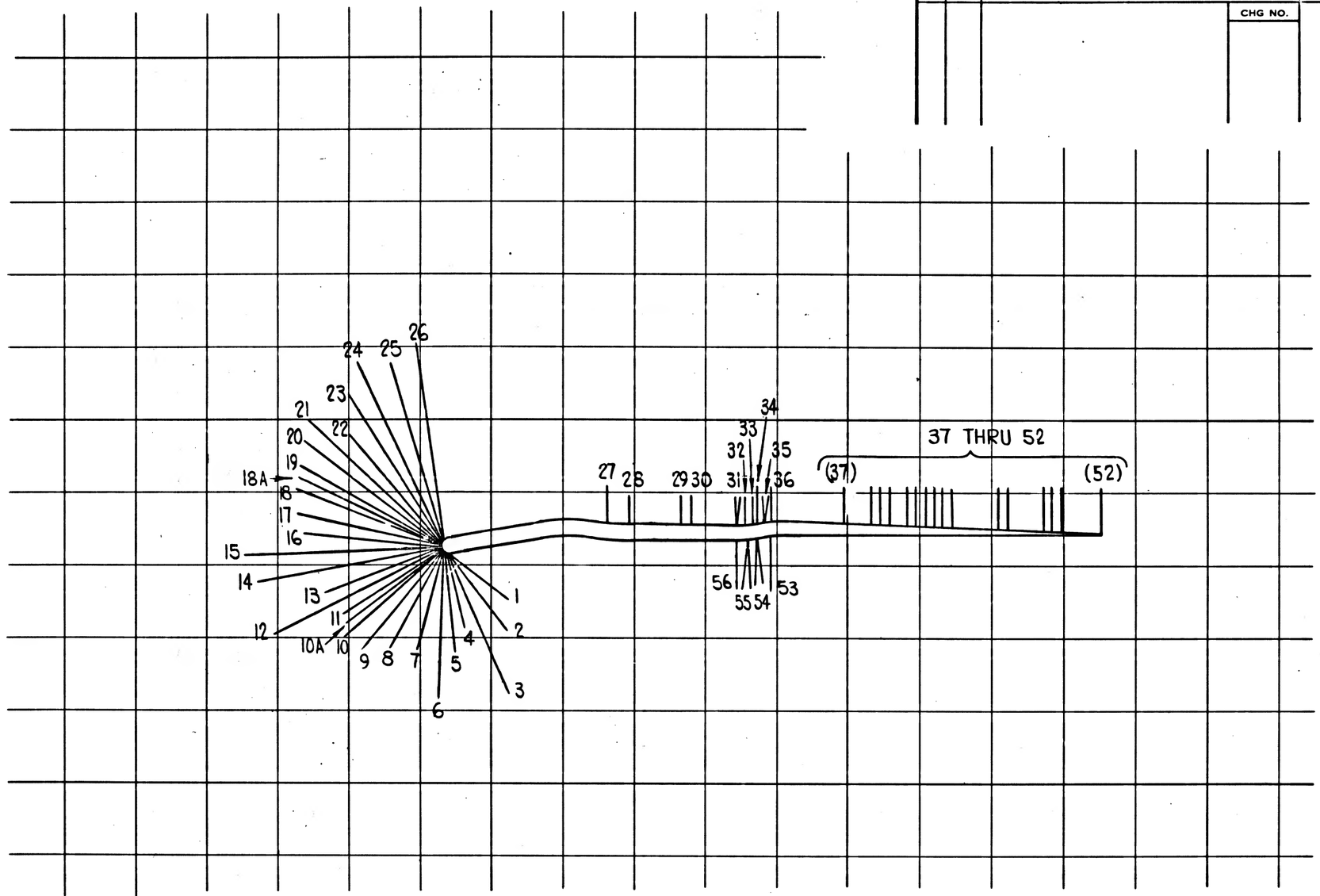
MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008261

SCALE - NONE | REV LTR + | SHEET 6 OF 7

MIL 2088 - 4-65 WIR

1008261

REVISIONS 1 of 3					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.



1007149	1007159
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
CONTRACT NAS 9-497

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN
ACS PN
DRAWN J. Wolski 9 SEP 64 DATE
CHECKED J. La Rima 28 SEP 64
APPROVAL R P Oberg 30 OCT 64
APPROVAL D. Bullock 11/9/64
NASA APPROVAL W J Phillips 11-12-64
MIT APPROVAL W Kuffer 12 Nov 64

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS "A"
(TRAY 9)

CODE IDENT NO. | SIZE C | 1008261
SCALE 1:1 | SHEET 7 OF 7

MIL 1077C-P

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

APPLICATION	
NEXT ASSY	USED ON
1007149	1007159

REVISIONS			14 of 3
SYM	DESCRIPTION	DATE	APPROVAL
A	REPLACED WITH CHANGE BY REV(B) PER TDRR 23191	18 OCT 65	RLP / T.M.

Ⓐ **REPLACED WITH CHANGE BY REV** Ⓑ

Charleston 5 Oct. 64

REV STATUS	REV	A	+	+	+	+	+	+
OF SHEETS	SHEET	1	2	3	4	5	6	7

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN	MANNED SPACECRAFT CENTER HOUSTON, TEXAS
ACSP PN	
DRAWN J. Wolski 9 SEP 64 (DATE) CHECKED J. Lima 28 SEP 64 APPROVAL R.P. Oubey 5 OCT 64 JHS APPROVAL D.B. Tat 11/9/64	WIRING HARNESS "C" (TRAY 9)
NASA APPROVAL W.J. Rhine 11-12-64 MIT APPROVAL W. Kupfer 12/16/64	CODE IDENT NO. — SIZE A — 1008263 — REV A
CONTRACT NAS 9-497	SCALE NONE — SHEET 1 OF 7

PENNANT NOTE

GENERAL NOTES

1. SEE CONDUCTOR CHART, PENNANT NOTE 1.
2. SEE CONDUCTOR CHART, PENNANT NOTE 2.
3. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4. MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5. SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6. SPIRALLING OF THE MARKING IS ALLOWED.
7. LACE HARNESS USING ITEM 2.
8. IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).
9. Y OR N IN TINNED COLUMN INDICATES YES OR NO.
10. GRID MODULE IS 1 INCH.
11. UNLESS OTHERWISE SPECIFIED ---
    FEATURE CENTERLINES ARE LOCATED WITHIN + OR - .12 INCH.
    END OF HOOKUP WIRES OR ACCESSORIES ARE LOCATED WITHIN + OR - .06 INCH.
12. BREAKOUTS OF INDIVIDUAL OR GROUPS OF CONDUCTORS ARE MINIMUM CONFIGURATION.
13. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
14. IN CONDUCTOR CHART CONDUCTOR LENGTHS ARE FOR REFERENCE ONLY

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008263
SCALE-NONE	REV LTR +	SHEET 2 OF 7

MIL 2084 4-63

PENNANT NOTE

GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE			
	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET		+.50-.50	+.50-.50	+.50-.50

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008263
SCALE-NONE	REV LTR +	SHEET 3 OF 7

MIL 2084 4-63

PENNANT NOTE

LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
13	1	1	1010639- 2	WIRE 13 FT. 7.45 IN. TOTAL LENGTH
	2	AR	MIL-T-713	LACING TAPE TYPE P CLASS 2 BLACK (ES-2732 NO. 18)

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008263
SCALE-NONE	REV LTR +	SHEET 4 OF 7

MIL 2084 4-63

APPLICATION

NEXT ASSY	USED ON
1007149	1007159

REVISIONS 14 OF 3

SYM	DESCRIPTION	DATE	APPROVAL
	-		

REV	+	+	+	+	+	+
SHEET	1	2	3	4	5	6
REV STATUS						7
OF SHEETS						

Houston 5 Oct. 64

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN 9 SEP 64 DATE

CHECKED 20 Sep 64 DATE

APPROVAL 11/9/64 DATE

APPROVAL 11/9/64 DATE

NASA APPROVAL

MIT APPROVAL

CONTRACT NAS 9-497

WIRING HARNESS "C" (TRAY 9)

REV

SIZE A 1008263

CODE IDENT NO.

SHEET 1 OF 7

SCALE NONE

INCHES 0 1 2

PHOTOGRAPHIC SCALE ONLY

GRV

WIRING HARNESS C + 1008263

CONDUCTOR NUMBER	ITEM NO.	INDIVIDUAL LENGTH ▷2	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT ▷2	FROM: T I N ▷2	FROM: TERMINATION SPEC. ▷1 ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT ▷2	TO: T I N ▷2	TO: TERMINATION SPEC ▷1 ITEM NO.	TO NO.
C 1	1	770	45A9P1-A 2	20N		6	45A9J3-B 4	20N		47
C 2	1	860	45A9P1-A 8	20N		7	45A9J3-B 7	20N		46
C 3	1	880	45A9P1-B 1	20N		5	45A9J3-B 2	20N		49
C 4	1	900	45A9P1-C 9	20N		8	45A9J3-B10	20N		44
C 5	1	480	45A9P1-D 4	20N		4	45A9J2-B 2	20N		55
C 6	1	560	45A9P1-F 4	20N		3	45A9J2-B 7	20N		54
C 7	1	540	45A9P1-G 2	20N		2	45A9J2-B14	20N		52
C 8	1	500	45A9P1-G 3	20N		1	45A9J2-B12	20N		53
C 9	1	420	45A9J3-A 2	20N		9	45A9J4-15	20N		42
C 10	1	420	45A9J3-A 3	20N		9	45A9J4-16	20N		40
C 11	1	420	45A9J3-A 4	20N		9	45A9J4-17	20N		39
C 12	1	420	45A9J3-A 6	20N		10	45A9J4-18	20N		37
C 13	1	420	45A9J3-A 7	20N		11	45A9J4-20	20N		35
C 14	1	410	45A9J3-A 9	20N		12	45A9J4-19	20N		36
C 15	1	630	45A9J3-A10	20N		13	45A9J5-A 7	20N		21
C 16	1	625	45A9J3-A12	20N		14	45A9J5-A 8	20N		22
C 17	1	550	45A9J3-A14	20N		15	45A9J5-A 4	20N		20
C 19	1	630	45A9J4- 4	20N		16	45A9J5-A21	20N		25

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER

▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008263

SCALE-NONE | REV LTR + | SHEET 5 OF 7

MIL 2088 - 4-65 WIR

GRV

WIRING HARNESS C + 1008263

CONDUCTOR NUMBER	ITEM NO.	INDIVIDUAL LENGTH ▷2	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT ▷2	FROM: T I N ▷2	FROM: TERMINATION SPEC. ▷1 ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT ▷2	TO: T I N ▷2	TO: TERMINATION SPEC ▷1 ITEM NO.	TO NO.
C 20	1	600	45A9J4- 8	20N		17	45A9J5-A22	20N		26
C 21	1	460	45A9J4-10	20N		18	45A9J5-A12	20N		24
C 22	1	370	45A9J4-14	20N		19	45A9J5-A 9	20N		29
C 23	1	440	45A9J5-A 3	20N		20	45A9J11-15	20N		28
C 24	1	430	45A9J5-A 8	20N		22	45A9J11-12	20N		30
C 25	1	520	45A9J5-A12	20N		24	45A9J11- 6	20N		31
C 26	1	300	45A9J5-A21	20N		25	45A9J11-16	20N		27
C 27	1	250	45A9J3-B 2	20N		49	45A9J7-14	20N		51
C 28	1	270	45A9J3-B 3	20N		48	45A9J7-12	20N		50
C 29	1	550	45A9J11-13	20N		29	45A9J5-A 9	20N		23
C 30	1	350	45A9J11- 4	20N		32	45A9J5-A22	20N		26
C 31	1	260	45A9J3-B 7	20N		46	45A9J9-14	20N		41
C 32	1	250	45A9J3-B 9	20N		45	45A9J9-12	20N		38
C 33	1	430	45A9J3-B10	20N		44	45A9J10-14	20N		34
C 34	1	430	45A9J3-B11	20N		43	45A9J10-12	20N		33

▷1 THE STD CONDUCTOR TERMINATION FIGURES ARE PER

▷2 DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

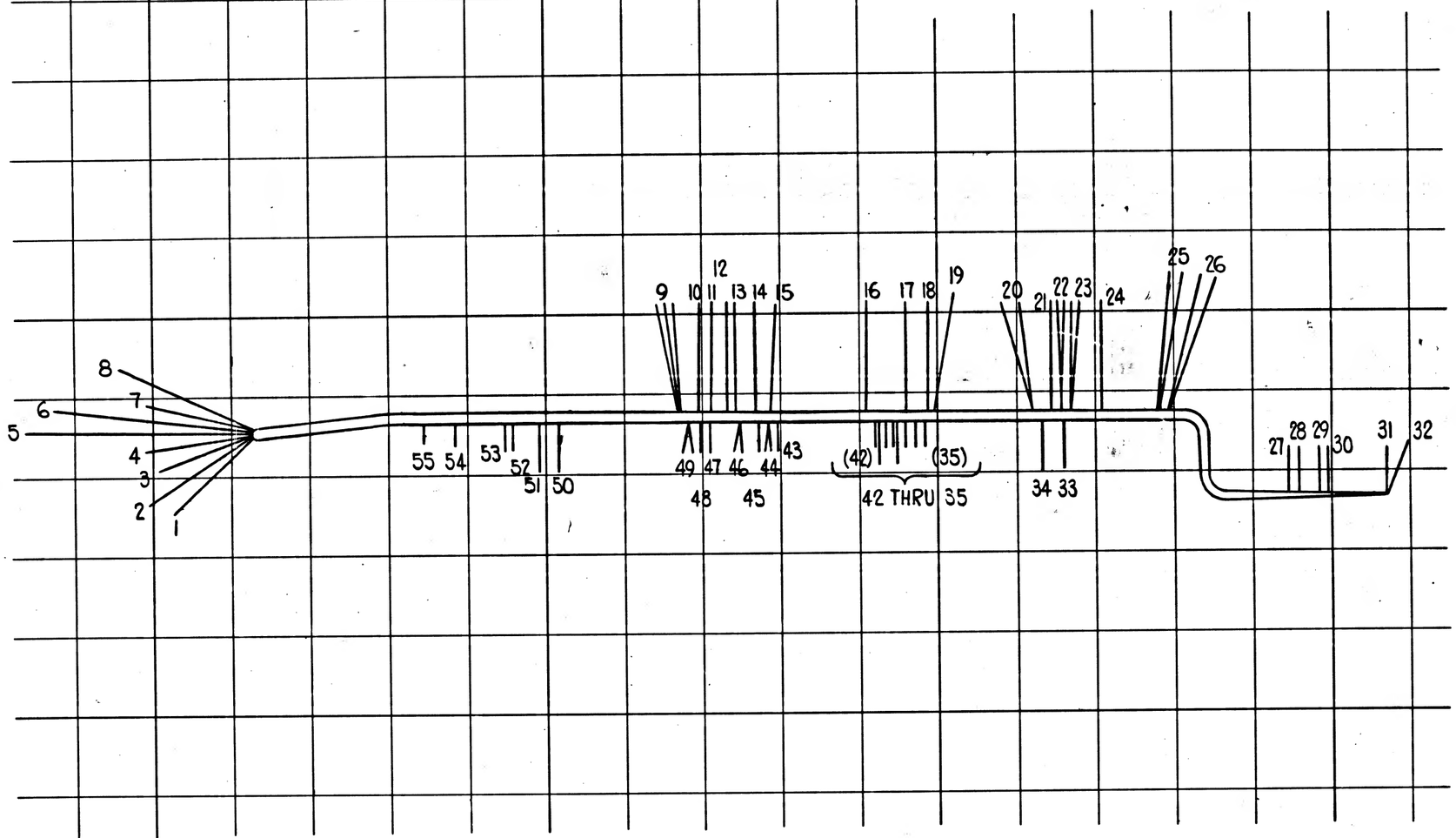
MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008263

SCALE-NONE | REV LTR + | SHEET 6 OF 7

MIL 2088 - 4-65 WIR

1008263

REVISIONS 14083					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.



1007149	1007159
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —

DO NOT SCALE THIS DRAWING

MATERIAL —

CONTRACT NAS 9-497

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

DRAWN J Nolaski 3SEP64 DATE

CHECKED J Linn 28SEP64

APPROVAL R Deberg 5Oct64

APPROVAL D Bartlett 11/9/64

NASA APPROVAL W J Rhea 11-12-64

MIT APPROVAL W Hoffman 12/10/64

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS "C"
(TRAY 9)

CODE IDENT NO. | SIZE C | 1008263

SCALE 1:1 | SHEET 7 of 7

MIL 1077C-P

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

APPLICATION		REVISIONS 14083			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
1007149	1007159	A	REPLACED WITH CHANGE BY REV(B) PER TDRR 23191	18 OCT 65	RP / T.M.

(A) REPLACED WITH CHANGE BY REV (B)

Charleston 5 Oct 64

REV										
SHEET										
REV STATUS	REV	A	+	+	+	+	+	+	+	+
OF SHEETS	SHEET	1	2	3	4	5	6	7	8	9

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

ACSP PN

DRAWN J. Wolski DATE 10 SEP 64
CHECKED 29 SEP 64
APPROVAL 5 OCT 64
APPROVAL 11/9/64

WIRING HARNESS "D"
(TRAY 9)

NASA APPROVAL
MIT APPROVAL 12 Nov 64

CODE IDENT NO.	SIZE		REV
	A	1008264	A

CONTRACT NAS 9-497 | SCALE NONE | SHEET 1 OF 9

PENNANT NOTE — GENERAL NOTES

1. SEE CONDUCTOR CHART, PENNANT NOTE 1.
2. SEE CONDUCTOR CHART, PENNANT NOTE 2.
3. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4. MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5. SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6. SPIRALLING OF THE MARKING IS ALLOWED.
7. LACE HARNESS USING ITEM 2.
8. IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).
9. Y OR N IN TINNED COLUMN INDICATES YES OR NO.
10. GRID MODULE IS 1 INCH.
11. UNLESS OTHERWISE SPECIFIED ---
    FEATURE CENTERLINES ARE LOCATED WITHIN + OR - .12 INCH.
    END OF HOOKUP WIRES OR ACCESSORIES ARE LOCATED WITHIN + OR - .06 INCH.
12. BREAKOUTS OF INDIVIDUAL OR GROUPS OF CONDUCTORS ARE MINIMUM CONFIGURATION.
13. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
14. IN CONDUCTOR CHART CONDUCTOR LENGTHS ARE FOR REFERENCE ONLY

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008264
SCALE-NONE	REV LTR +	SHEET 2 OF 9

MIL 2084 4-63

PENNANT NOTE — GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET		+.50-.50	+.50-.50	+.50-.50

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008264
SCALE-NONE	REV LTR +	SHEET 3 OF 9

MIL 2084 4-63

PENNANT NOTE — LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
13	1	1	1010639- 2	WIRE 36 FT. 7 IN. TOTAL LENGTH
	2	AR	MIL-T-713	LACING TAPE TYPE P CLASS 2 BLACK (ES-2732 NO. 18)

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008264
SCALE-NONE	REV LTR +	SHEET 4 OF 9

MIL 2084 4-63

APPLICATION

NEXT ASSY	USED ON
1007149	1007159

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL

Checked 5 OCT. 64

REV SHEET: + + + + + + + + + + / 1 2 3 4 5 6 7 8 9
REV STATUS: REV
OF SHEETS: SHEET

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN — DATE 10 SEP 64
CHECKED — DATE 29 SEP 64
APPROVAL — DATE 29 SEP 64
APPROVAL — DATE 11 Sept 64

NASA APPROVAL — DATE 10/12/64
MIT APPROVAL — DATE 10/12/64

CONTRACT NAS 9-497

WIRING HARNESS "D" (TRAY 9)

CODE IDENT NO. | SIZE A | 1008264 | REV

SCALE NONE | SHEET 1 OF 9

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

GRX — WIRING HARNESS D — 1008264

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM TIN [2]	FROM TERMINATION SPEC [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO TIN [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
D 19	1	620	45A9P1-T 1	20N		1	45A9J7-11	20N		36
D 20	1	1190	45A9P1-T 2	20N		2	45A9J9- 1	20N		58
D 21	1	1120	45A9P1-T 3	20N		3	45A9J9- 3	20N		56
D 22	1	990	45A9P1-T 4	20N		4	45A9J9-13	20N		52
D 23	1	530	45A9P1-T 5	20N		5	45A9J7-13	20N		35
D 24	1	730	45A9P1-T 6	20N		6	45A9J8-13	20N		44
D 25	1	470	45A9J2-A11	20N		90	45A9J6- 8	20N		73
D 26	1	450	45A9J2-A18	20N		88	45A9J6- 9	20N		75
D 29	1	480	45A9J5-A14	20N		84	45A9J11- 2	20N		79
D 30	1	580	45A9J8- 2	20N		50	45A9J5-A16	20N		85
D 31	1	410	45A9J5-A17	20N		82	45A9J11- 5	20N		78
D 32	1	820	45A9J7- 2	20N		41	45A9J5-A20	20N		81
D 33	1	1600	45A9J2-B 1	20N		26	45A9J6-10	20N		76
D 34	1	200	45A9J2-B 3	20N		27	45A9J2-B16	20N		33
D 35	1	430	45A9J2-B 4	20N		28	45A9J3-B 1	20N		49
D 36	1	170	45A9J2-B 6	20N		29	45A9J2-B11	20N		32
D 37	1	1575	45A9J2-B 8	20N		30	45A9J6-11	20N		77
D 38	1	1504	5A9J2-B10	20N		31	45A9J2-B17	20N		34

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER
[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008264 | SCALE-NONE | REV LTR + | SHEET 6 OF 9

MIL 2089 - 4-65 WIR

GRX — WIRING HARNESS D — 1008264

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM TIN [2]	FROM TERMINATION SPEC [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO TIN [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
D 39	1	780	45A9J3-B 1	20N		43	45A9J5-B17	20N		67
D 40	1	300	45A9J5-B17	20N		67	45A9J10-11	20N		60
D 41	1	700	45A9J6- 8	20N		73	45A9J10- 5	20N		63
D 42	1	700	45A9J6- 9	20N		75	45A9J10- 6	20N		61
D 43	1	270	45A9J7-11	20N		36	45A9J8-11	20N		46
D 44	1	270	45A9J7- 6	20N		38	45A9J8- 6	20N		47
D 45	1	270	45A9J7- 5	20N		39	45A9J8- 5	20N		48
D 46	1	1010	45A9J7- 3	20N		40	45A9J11- 5	20N		78
D 47	1	800	45A9J7- 1	20N		42	45A9J11-20	20N		70
D 48	1	270	45A9J8-11	20N		46	45A9J9-11	20N		53
D 49	1	270	45A9J8- 6	20N		47	45A9J9- 6	20N		54
D 50	1	270	45A9J8- 5	20N		48	45A9J9- 5	20N		55
D 51	1	810	45A9J8- 3	20N		49	45A9J11- 2	20N		79
D 52	1	670	45A9J8- 1	20N		51	45A9J11-11	20N		72
D 53	1	270	45A9J9-11	20N		53	45A9J10-11	20N		60
D 54	1	270	45A9J9- 6	20N		54	45A9J10- 6	20N		62
D 55	1	270	45A9J9- 5	20N		55	45A9J10- 5	20N		63
D 56	1	470	45A9J9- 3	20N		56	45A9J11-14	20N		71

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER
[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008264 | SCALE-NONE | REV LTR + | SHEET 7 OF 9

MIL 2089 - 4-65 WIR

GRX — WIRING HARNESS D — 1008264

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM TIN [2]	FROM TERMINATION SPEC [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO TIN [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
D 1	1	1590	45A9P1-M 5	20N		24	45A9J2-A12	20N		89
D 2	1	1600	45A9P1-M 6	20N		25	45A9J2-A 3	20N		91
D 3	1	1490	45A9P1-N 5	20N		21	45A9J2-A23	20N		87
D 4	1	830	45A9P1-N 6	20N		22	45A9J7- 5	20N		39
D 5	1	1010	45A9P1-P 1	20N		17	45A9J8- 1	20N		51
D 6	1	1400	45A9P1-P 2	20N		18	45A9J10- 1	20N		68
D 7	1	1350	45A9P1-P 5	20N		19	45A9J3-B 6	20N		45
D 8	1	600	45A9P1-P 6	20N		20	45A9J7- 6	20N		38
D 9	1	960	45A9P1-R 1	20N		12	45A9J8- 3	20N		49
D 10	1	1380	45A9P1-R 2	20N		13	45A9J10- 3	20N		64
D 11	1	1530	45A9P1-R 4	20N		14	45A9J5-B16	20N		65
D 12	1	1330	45A9P1-R 5	20N		15	45A9J10- 2	20N		66
D 13	1	1190	45A9P1-R 6	20N		16	45A9J10-13	20N		59
D 14	1	750	45A9P1-S 2	20N		7	45A9J7- 1	20N		42
D 15	1	700	45A9P1-S 3	20N		8	45A9J7- 3	20N		40
D 16	1	1160	45A9P1-S 4	20N		9	45A9J9- 2	20N		57
D 17	1	660	45A9P1-S 5	20N		10	45A9J7- 2	20N		41
D 18	1	880	45A9P1-S 6	20N		11	45A9J8- 2	20N		50

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER
[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008264 | SCALE-NONE | REV LTR + | SHEET 5 OF 9

MIL 2089 - 4-65 WIR

GRX — WIRING HARNESS D — 1008264

CONDUCTOR NUMBER	CONDUCTOR ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM TIN [2]	FROM TERMINATION SPEC [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO TIN [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
D 57	1	400	45A9J10- 3	20N		64	45A9J11- 1	20N		80
D 58	1	270	45A9J10- 1	20N		68	45A9J11-10	20N		74
D 59	1	230	45A9J11- 6	20N		78	45A9J11-21	20N		69
D 60	1	330	45A9J9- 1	20N		58	45A9J11-22	20N		69
D 61	1	675	45A9P1-M 4	20N		23	45A9J2-B25	20N		37
D 62	1	400	45A9J5-A 3	20N		85	45A9J3-A16	20N		86

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER
[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

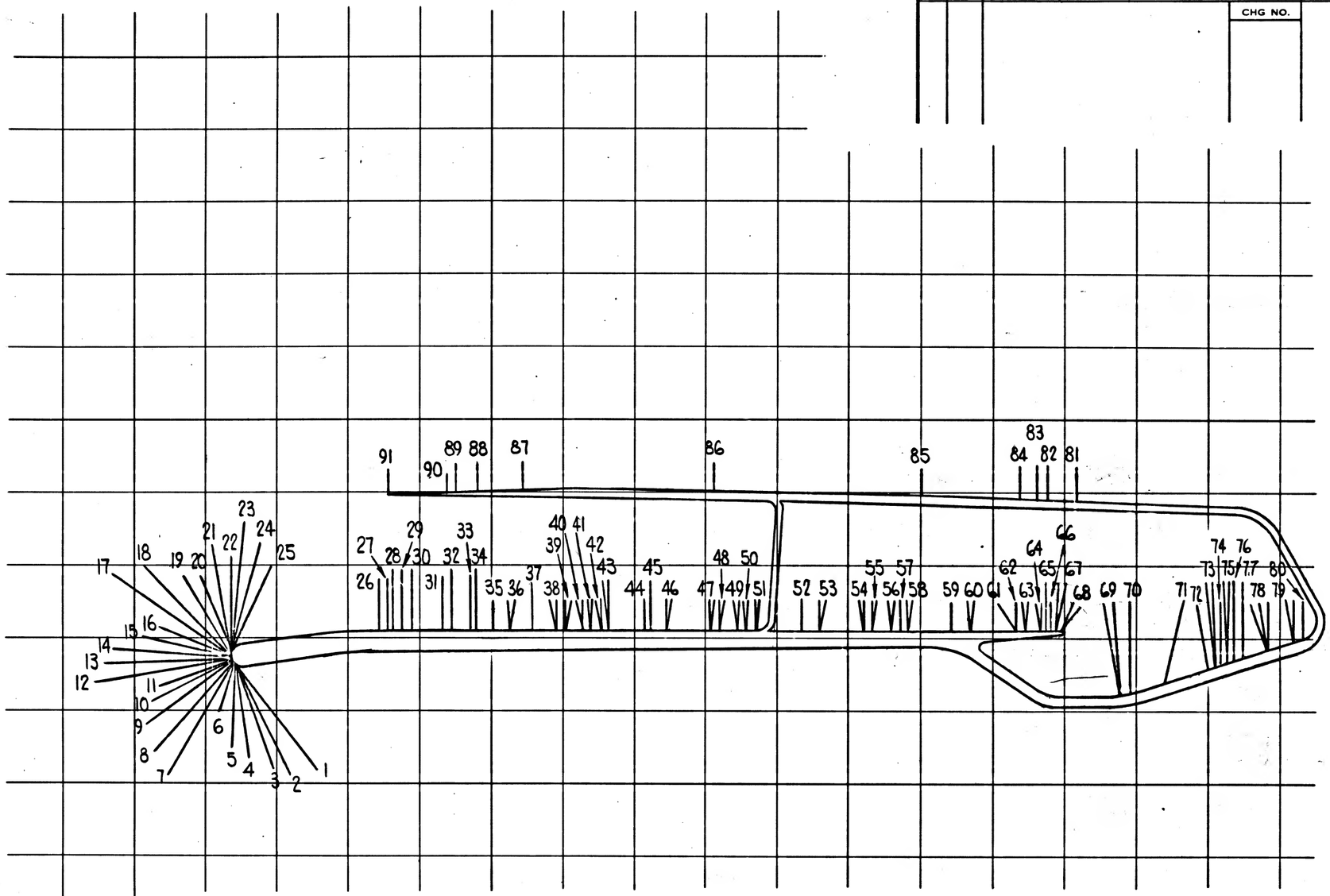
MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008264 | SCALE-NONE | REV LTR + | SHEET 8 OF 9

MIL 2089 - 4-65 WIR

INCHES
0 1 2
KUDOGRAPHIC SCALE ONLY

1008264

REVISIONS 1408 3					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.



1007149	1007159
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
CONTRACT NAS 9-497

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN
ACSP PN
DRAWN D Holeski 10 SEP 64 DATE
CHECKED D Rivera 28SEP64
APPROVAL R P Ogburn 5 OCT 64
APPROVAL D. B. Trost 11/9/64
NASA APPROVAL 11-12 W J Rhea
MIT APPROVAL W Hoffman 12 Nov 64

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS "D"
(TRAY 9)

CODE IDENT NO.
SIZE C
1008264
SCALE 1:1
SHEET 9 of 9

MIL 1077C-P

INCHES
1 0 2
PHOTOGRAPHIC SCALE ONLY

1008264

APPLICATION		REVISIONS 14083			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
1007149	1007149	A	REPLACED WITH CHANGE BY REV (B) PER TDRR 23191	18 OCT 65	RLP / J.M.

(A) REPLACED WITH CHANGE BY REV (B)

Checked 5 Oct 64

REV STATUS OF SHEETS						
REV	A	+	+	+	+
SHEET	1	2	3	4	5

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

ACSP PN

		DATE
DRAWN	J. Wolski	11 SEP 64
CHECKED	L. Lima	28 SEP 64
APPROVAL	R.P. Cushing	5 OCT 64
APPROVAL	D. A. Stat	11/9/64
NASA APPROVAL	(signature)	11-24
MIT APPROVAL	(signature)	12 Nov 64

WIRE LIST 'AA'
(TRAY 9)

CODE IDENT NO.	SIZE		REV
	A	1008265	A

CONTRACT NAS 9-497 | SCALE NONE | SHEET 1 OF 5

PENNANT NOTE — GENERAL NOTES

1. SEE CONDUCTOR CHART, PENNANT NOTE 1.
2. SEE CONDUCTOR CHART, PENNANT NOTE 2.
3. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4. MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5. SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6. SPIRALLING OF THE MARKING IS ALLOWED.
7. IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).
8. Y OR N IN TINNED COLUMN INDICATES YES OR NO.
9. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
10. INSTALL ITEM 2 PER ND1002206

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008265
SCALE-NONE	REV LTR +	SHEET 2 OF 5

MIL 2084 4-63

PENNANT NOTE — GENERAL NOTES

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE				
	WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008265
SCALE-NONE	REV LTR +	SHEET 3 OF 5

MIL 2084 4-63

REVISIONS 1983

REV	DESCRIPTION	DATE	APPROVAL
+	-		

APPLICATION	
NEXT ASSY	USED ON
1007149	1007149

REV + + + + +
SHEET 1 2 3 4 5
REV STATUS REV
OF SHEETS SHEET

Checked 5 Oct 64

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN J. Mosher DATE 11 SEP 64
CHECKED Victoria 28 SEP 64
APPROVAL R.O. Adams 5 OCT 64
APPROVAL R. Stoltz 11 Oct 64

WIRE LIST "AA" (TRAY 9)

NASA APPROVAL W. Fredrickson 11 Nov 64
MIT APPROVAL W. Hamilton 11/17/64

CODE IDENT NO. | SIZE A | 1008265 | REV

SCALE NONE | SHEET 1 OF 5

PENNANT NOTE — LIST OF MATERIALS

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1010639-2	WIRE 15.70 INCHES TOTAL LENGTH
	2	1	MS25036-44	TERMINAL LUG
	3	AR	1006757-8	WIRE .75 INCHES TOTAL LENGTH

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008265
SCALE-NONE	REV LTR +	SHEET 4 OF 5

MIL 2084 4-63

INCHES 0 1 2

ARMSTRONG CORK COMPANY

GRY

WIRE LIST AA

+ 1008265

CONDUCTOR NUMBER	ITEM NO.	INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT [2]	FROM TIN [3]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT [2]	TO TIN [3]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.
AA 1	1	50	45A9P1-B 2	20N			45A9P1-D 2	20N		
AA 2	1	50	45A9P1-B 3	20N			45A9P1-B 5	20N		
AA 3	1	250	45A9J3-B 4	20N			45A9J8-14	20N		
AA 4	1	250	45A9J3-B 5	20N			45A9J8-12	20N		
AA 5	3	25	45A9J5-A13	N			45A9J5-A15	N		
AA 6	1	110	45A9J5-A18	20N			45A9J5-A19	20N		
AA 7	1	130	45A9J2-A 5	20N			45A9J2-A10	20N		
AA 8	1	180	45A9J2-A 7	20N			45A9J2-A18	20N		
AA 9	1	120	45A9J2-A 2	20N			45A9J2-A11	20N		
AA 10	1	180	45A9J2-A 4	20N			45A9J2-A17	20N		
AA 11	1	250	45A9P1-P 3	20N			45A9E1	20N	2	
AA 13	3	25	45A9J5-A10	N			45A9J5-A11	N		
AA 15	3	25	45A9J4- 1	N			45A9J4- 2	N		

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIZE A

1008265

SCALE - NONE | REV LTR + | SHEET 5 OF 5

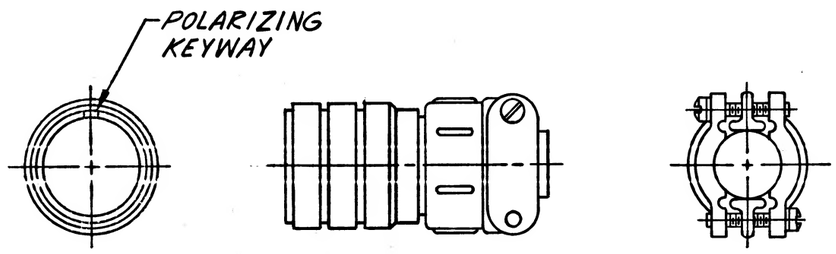
MIL 2088 : 4-65 WIR

INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED IN MIL-D-70327

THE PART NUMBER IS THE DRAWING NUMBER PLUS THE APPLICABLE DASH NUMBER

REVISIONS 14446

SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.



DASH NO.	DEUTSCH PART NO.
-001	DS07-7PN-059
-002	DS07-7PW-059
-003	DS07-7PX-059
-004	DS07-7PY-059
-005	DS07-7PB-059
-006	DS07-12PN-059
-007	DS07-12PW-059
-008	DS07-12PX-059
-009	DS07-12PY-059
-010	DS07-12PB-059
-011	DS07-19PN-059
-012	DS07-61PN-059

ORIGINAL SOURCE OF SUPPLY:
THE DEUTSCH COMPANY
ELECTRONIC COMPANY DIVISION
BANNING, CALIFORNIA

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
CONTRACT NAS9-497

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN
ACSP PN
DRAWN Brechtel 18SEP64
CHECKED Manning 14OCT64
APPROVAL Dejong 15OCT64
APPROVAL Rauch 15OCT64
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CONNECTOR, PLUG, ELECTRICAL
SOURCE CONTROL DRAWING

CODE IDENT NO.	SIZE	
	C	1008266
SCALE —		SHEET 1 OF 1

MIL 1077C-P

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

TDRR 14446 NOV 24 1964

APPLICATION		REVISIONS 14446			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
		A	REVISED PER TDRR 15965	26 FEB 65	JJJ

26 Oct 64

REV STATUS OF SHEETS					
REV	A	+	+	+	A
SHEET	1	2	3	4	5

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

ACSP PN

DRAWN R. Schwabe DATE 6 OCT 64
CHECKED 21 OCT 64
APPROVAL R. Cohen 24 OCT 64
APPROVAL 28 Oct 64

WIRE LIST AA (TRAY 2)

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO.	SIZE		REV
	A	1008269	A

CONTRACT NAS 9-497 | SCALE — | SHEET 1 OF 5

PENNANT NOTE — GENERAL NOTES

TDRR 14446 NOV 24 1964

NOTE	
1	SEE CONDUCTOR CHART. PENNANT NOTE 1
2	SEE CONDUCTOR CHART. PENNANT NOTE 2
3	INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4	MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5	SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6	SPIRALLING OF THE MARKING IS ALLOWED.
7	Y OR N IN TINNED COLUMN INDICATES YES OR NO.
8	LENGTHS SPECIFIED ARE FOR CONDUCTORS BEFORE ATTACHING TO AN ACCESSORY.
9	VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
11	INSTALL ITEM 5 PER ND

PENNANT NOTE — GENERAL NOTES

TDRR 14446 NOV 24 1964

TOLERANCE CHART. UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE. STRIP WIRE. STRIP JACKET. CUT WIRE OR CUT SHIELD.	TOLERANCE				
	WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+ .06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+ .50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

PENNANT NOTE — LIST OF MATERIALS

TDRR 14446 NOV 24 1964

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1010639- 2	WIRE 32 INCHES TOTAL LENGTH TOTAL LENGTH 14.0 INCHES
9	3	AR	1006757- 8	WIRE 3.1 INCHES TOTAL LENGTH
	5	1	MS25036- 44	TERMINAL LUG
	6	AR	MIL-W-16878/1B-24-19 STND	WIRE 3.0 INCHES TOTAL LENGTH

CONDUCTOR INDIVIDUAL LENGTH NUMBER	ITEM NO. 2	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT 2	T 1 N	TERMINATION SPEC. 1 ITEM NO.	NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT 2	T 1 N	TERMINATION SPEC. 1 ITEM NO.	NO.
AA 1	3	40		45A2P1-S 1		45A2P1-S 2			
AA 2	3	40		45A2P1-S 3		45A2P1-S 4			
AA 3	6	300		45A2P1-S 2	20N	45A2P1-G 4	20N		
AA 4	3	60		45A2P1-R 2		45A2P1-R 3			
				45A2P1-R 3		45A2P1-R 4			
AA 6	3	25		45A2J2- 8		45A2J2- 9			
AA 7	3	25		45A2J2-13		45A2J2-14			
AA 8	3	25		45A2J9- 1		45A2J9- 2			
AA 9	3	25		45A2J9- 3		45A2J9- 4			
AA 10	3	25		45A2J9- 5		45A2J9- 6			
AA 11	3	25		45A2J9-13		45A2J9-14			
AA 19	1	400		45A2P1-K 3	20N	45A2E1	20N	5	
AA 20	1	500		45A2P1-C 1	20N	45A2R1- 1	20N		
AA 21	1	500		45A2P1-C 2	20N	45A2R1- 2	20N		

1> THE STD CONDUCTOR TERMINATION FIGURES ARE PER

2> DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

TDRR 14446 NOV 24 1964

APPLICATION		REVISIONS			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
		A	REVISED PER TDRR 15965	26 FEB 65	JJJ W.S.
		B	REPLACED WITH CHANGE BY REV (C) PER TDRR 23191	18 OCT 65	RLP TM.

Charleston 26 Oct 64

REV						
SHEET						
REV STATUS	REV	B	+	+	+	A
OF SHEETS	SHEET	1	2	3	4	5

Ⓑ REPLACED WITH CHANGE BY REV Ⓒ

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

DRAWN R. Schwabb 8 OCT DATE 64
CHECKED J. Jones 21 OCT 64
APPROVAL R.C. Lang 28 OCT 64
APPROVAL [illegible] 28 OCT 64
NASA APPROVAL [illegible]
MIT. APPROVAL W.S. 28 Oct 64

CONTRACT NAS 9-497

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

WIRE LIST AA
(TRAY 2)

CODE IDENT NO.	SIZE	1008269	REV
	A		B

SCALE — SHEET 1 OF 5

PENNANT NOTE — GENERAL NOTES — TDRR 14446 — NOV 24 1964

NOTE	
1	SEE CONDUCTOR CHART. PENNANT NOTE 1
2	SEE CONDUCTOR CHART. PENNANT NOTE 2
3	INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4	MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5	SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6	SPIRALLING OF THE MARKING IS ALLOWED.
7	Y OR N IN TINNED COLUMN INDICATES YES OR NO.
8	LENGTHS SPECIFIED ARE FOR CONDUCTORS BEFORE ATTACHING TO AN ACCESSORY.
9	VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
11	INSTALL ITEM 5 PER ND

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008269
SCALE - NONE	REV LTR +	SHEET 2 OF 5

MIL 2084 4-63

PENNANT NOTE — GENERAL NOTES — TDRR 14446 — NOV 24 1964

TOLERANCE CHART. UNLESS OTHERWISE SPECIFIED —

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE				
	WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008269
SCALE - NONE	REV LTR +	SHEET 3 OF 5

MIL 2084 4-63

TDRR 14446 NOV 24 1964

REVISIONS

APPLICATION NEXT ASSY	APPLICATION USED ON	SYM	DESCRIPTION	DATE	APPROVAL

REV + + + + SHEET 1 2 3 4 5
REV STATUS + + + + + OF SHEETS

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN R. Schwartz DATE 8 OCT 64
CHECKED Jim Jones 21 OCT 64
APPROVAL R. Fahey 23 OCT 64
APPROVAL Norman Hayes 26 OCT 64
NASA APPROVAL
MIT APPROVAL

WIRE LIST AA (TRAY 2)

CODE IDENT NO. 10008269 SIZE A REV

SCALE — SHEET OF 5

CONTRACT NAS9-497

Variation 26 OCT 64

PENNANT NOTE — LIST OF MATERIALS — TDRR 14446 — NOV 24 1964

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1010639- 2	WIRE 32 INCHES TOTAL LENGTH TOTAL LENGTH 14.0 INCHES
9	3	AR	1006757- 8	WIRE 3.1 INCHES TOTAL LENGTH
	5	1	MS25036- 44	TERMINAL LUG
	6	AR	MIL-W-16878/18-24-19 STND	WIRE 3.0 INCHES TOTAL LENGTH

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008269
SCALE - NONE	REV LTR +	SHEET 4 OF 5

MIL 2084 4-63

PHOTOGRAPHIC SCALE ONLY

GST

WIRE LIST AA

1008269

TDRR + 14446

NOV 24 1964

CONDUCTOR NUMBER	ITEM NO.	INDIVIDUAL LENGTH [2]	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	FROM: T I N [2]	FROM: TERMINATION SPEC [1] / ITEM NO.	FROM: NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TO: T I N [2]	TO: TERMINATION SPEC [1] / ITEM NO.	TO: NO.
AA 1	3	40	45A2P1-S 1				45A2P1-S 2			
AA 2	3	40	45A2P1-S 3				45A2P1-S 4			
AA 3	6	300	45A2P1-S 2	20N			45A2P1-G 4	20N		
AA 4	3	40	45A2P1-R 2				45A2P1-R 3			
AA 5	3	40	45A2P1-R 3				45A2P1-R 4			
AA 6	3	25	45A2J2- 8				45A2J2- 9			
AA 7	3	25	45A2J2-13				45A2J2-14			
AA 8	3	25	45A2J9- 1				45A2J9- 2			
AA 9	3	25	45A2J9- 3				45A2J9- 4			
AA 10	3	25	45A2J9- 5				45A2J9- 6			
AA 11	3	25	45A2J9-13				45A2J9-14			
AA 19	1	400	45A2P1-K 3	20N			45A2E1	20N	5	
AA 20	1	500	45A2P1-C 1	20N			45A2R1- 1	20N		
AA 21	1	500	45A2P1-C 2	20N			45A2R1- 2	20N		

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SIZE A

1008269

SCALE - NONE

REV LTR +

SHEET 5 OF 5

MIL 2088 - 4-63 WIR

INCHES 0 1 2

TDRR 14446 NOV 24 1964

APPLICATION		REVISIONS			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
		A	REPLACED WITH CHANGE BY REV(B) PER TDRR 23191	18 OCT 65	RLP T.M.

Ⓐ REPLACED WITH CHANGE BY REV Ⓑ

Charleston 26 Oct. 64

REV STATUS OF SHEETS	REV	A	+	+	+
	SHEET	1	2	3	4

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN	MANNED SPACECRAFT CENTER HOUSTON, TEXAS		
ACSP PN			
DRAWN R. Schwabe DATE 8 OCT 64 CHECKED W. Kuna 13 OCT 64 APPROVAL R. Oqbang 28 OCT 64 APPROVAL [signature] 28 OCT 64	WIRE LIST AA (TRAY 3)		
NASA APPROVAL [signature] MIT APPROVAL W. Cayfer 24 Nov 64	CODE IDENT NO.	SIZE A	1008270 REV A
CONTRACT NAS 9-497	SCALE —		SHEET 1 OF 4

PENNANT NOTE — GENERAL NOTES

TDRR 14446 NOV 24 1964

1. SEE CONDUCTOR CHART, PENNANT NOTE 1.
2. SEE CONDUCTOR CHART, PENNANT NOTE 2.
3. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4. MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5. SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6. SPIRALLING OF THE MARKING IS ALLOWED.
7. Y OR N IN TINNED COLUMN INDICATES YES OR NO.
8. LENGTHS SPECIFIED ARE FOR CONDUCTORS BEFORE ATTACHING TO AN ACCESSORY.
9. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ——

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE WIRE OR CABLE	STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.06-.00	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.50-.00	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET	+1.00-.00		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET	+2.00-.00				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008270 | SCALE - NONE | REV LTR + | SHEET 2 OF 4

MIL 2084 4-63

PENNANT NOTE — LIST OF MATERIALS

TDRR 14446 NOV 24 1964

NOTE	ITEM	QTY	PART NO	DESCRIPTION
9	1	AR	1010639-2	WIRE 36 INCHES TOTAL LENGTH

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008270 | SCALE - NONE | REV LTR + | SHEET 3 OF 4

MIL 2084 4-63

TDRR 14446 NOV 24 1964

APPLICATION — NEXT ASSY | USED ON

REVISIONS — SYM | DESCRIPTION | DATE | APPROVAL

REV | + | + | +
SHEET | 1 | 2 | 3 | 4
REV STATUS | REV | + | + | +
OF SHEETS | SHEET | 1 | 2 | 3 | 4

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

WIRE LIST AA (TRAY 3)

CODE IDENT NO. | SIZE | REV
A | 1008270

SCALE — | SHEET 1 OF 4

DRAWN R. Schwenke DATE 8 OCT 64
CHECKED Arlene Bond DATE 13 OCT 64
APPROVAL R. Ogburn 21 Oct 64
APPROVAL A. Ogburn 21 Oct 64
NASA APPROVAL W. Fuller 21 Oct 64
MIT APPROVAL

CONTRACT NAS 9-497

Revision 26 Oct 64

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	FROM: TIN	FROM: TERMINATION SPEC. ITEM NO.	TO: CUT WIRE OR SHIELD / STRIP WIRE OR JACKET / CIRCUIT POINT	TO: TIN	TO: TERMINATION SPEC. ITEM NO.
AA 1	1	1800 45A3P1-C1	2 ON		45A3R1-1	2 ON	
AA 2	1	1800 45A3P1-C2	2 ON		45A3R1-2	2 ON	

▽ THE STD CONDUCTOR TERMINATION FIGURES ARE PER MIL 2088 - 4-65 WIR

▽ DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008270 | SCALE - NONE | REV LTR + | SHEET 4 OF 4

INCHES
PHOTOGRAPHIC SCALE ONLY

TDRR 1-4-1-6 NOV 24 1964

APPLICATION		REVISIONS 14446			
NEXT ASSY	USED ON	SYM	DESCRIPTION	DATE	APPROVAL
		A	REPLACED WITH CHANGE BY REV B PER TDRR 19781	7 JUN 65	WSM EF

(A) REPLACED WITH CHANGE BY REV B

Charleston 26 Oct 64

REV															
SHEET															
REV STATUS	REV	A	+	+	+	+	+	+	+	+	+	+	+	+	+
OF SHEETS	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN

ACSP PN

DRAWN R. Schenk DATE 7 OCT 64
CHECKED [illegible] 26 OCT 64
APPROVAL [illegible] 28 OCT 64
APPROVAL [illegible] 28 OCT 64
NASA APPROVAL [illegible]
MIT APPROVAL [illegible] 11/24/64
CONTRACT NAS 9-497

MANNED
SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS A
(TRAY 4)

CODE IDENT NO.	SIZE		REV
	A	1008271	A

SCALE — SHEET 1 OF 14

NOTE NUMBER	GENERAL NOTES DESCRIPTION
1	NOT APPLICABLE
2	DELETED
3	INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4	MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5	SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6	SPIRALLING OF THE MARKING IS ALLOWED.
7	LACE HARNESS USING ITEM 5
8	IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).
9	DELETED
10	GRID MODULE IS 1 INCH.
11	UNLESS OTHERWISE SPECIFIED --- FEATURE CENTERLINES ARE LOCATED WITHIN + OR - .12 INCH. END OF HOOKUP WIRES OR ACCESSORIES ARE LOCATED WITHIN + OR - .06 INCH.
12	BREAKOUTS OF INDIVIDUAL OR GROUPS OF CONDUCTORS ARE MINIMUM CONFIGURATION.
13	VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
14	IN CONDUCTOR CHART CONDUCTOR LENGTHS ARE FOR REFERENCE ONLY
15	INSTALL ITEM 2 PER ND

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR B	SHEET 2 OF 18

MIL 2084 4-63

NOTE NUMBER	GENERAL NOTES DESCRIPTION
16	INSTALL ITEMS 3 AND 4 PER ND

TOLERANCE CHART, UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE, STRIP WIRE, STRIP JACKET, CUT WIRE OR CUT SHIELD.	TOLERANCE STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR B	SHEET 3 OF 18

MIL 2084 4-63

APPLICATION NEXT ASSY	APPLICATION USED ON
1007534	1007574

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL
B	REPLACES REV A WITH CHANGE PER TDRR 1118	11 MAY 65	J J J

(B) REPLACES REV A WITH CHANGE

REV	B B B B B B B B B B B B B B B B B B
SHEET	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
REV STATUS	
OF SHEETS	

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

WIRING HARNESS A (TRAY 4)

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN R. SCHWABE 7 OCT 64 DATE

CHECKED J. A. LIMA 26 OCT 64

APPROVAL R. OSBERG 28 OCT 64

APPROVAL [illegible] 11/65

NASA APPROVAL [illegible]

MIT APPROVAL [illegible]

CONTRACT NAS 9-497

CODE IDENT NO. 1008271 SIZE A REV B

SCALE - SHEET 1 OF 18

SEE NOTE

LIST OF MATERIALS

NUMBER	ITEM	QTY	PART NO.	DESCRIPTION
13	1	AR	1010639- 2	WIRE, 77 FEET 5.8 IN. TOTAL LENGTH
13	2	24	1010738- 6	CONTACT, ELEC
13	3	1	1010476-168	INSULATION, SLEEVING, ELEC, HEAT SHRINK
13	4	1	1010711- 1	SPLICE REDUCER
13	5	AR	MIL-T-713	LACING TAPE, TYPE P, CLASS 2, BLACK (ES-2732 NO. 18)
	6	AR	MIL-W-16878/18-24-19 STND WHT	WIRE 6.6 IN. TOTAL LENGTH
	7	AR	MIL-W-16878/18-20-19 STND WHT	WIRE 8 FT 3.1 IN. TOTAL LENGTH

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR B	SHEET 4 OF 18

MIL 2084 4-63

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 1	1	3.40	45A4P1-D6	109				.20	NO			C
			45A4J7-1	95				.20	NO			
A 2	1	4.20	45A4P1-F3	218				.20	NO			C
			45A4J7-4	92				.20	NO			
A 3	1	2.00	45A4P1-D5	217				.20	NO			C
			45A4J7-6	90				.20	NO			
A 4	1	3.00	45A4P1-C6	101				.20	NO			E
			45A4J7-10	85				.20	NO			
A 5	1	3.40	45A4P1-C5	100				.20	NO			E
			45A4J7-11	84				.20	NO			
A 6	1	5.20	45A4P1-G3	222				.20	NO			C
			45A4J7-13	82				.20	NO			
A 7	1	4.30	45A4P1-K4	228				.20	NO			C
			45A4J7-2	94				.20	NO			
A 8	7	5.60	45A4P1-R2	235				.25	YES			B
			45A4J7-7	88				.25	YES			
A 9	1	8.70	45A4P1-D4	216				.20	NO			C
			45A4J5-1	57				.20	NO			
A 10	1	7.80	45A4P1-F4	219				.20	NO			C
			45A4J5-4	54				.20	NO			
A 11	1	8.80	45A4P1-D3	107				.20	NO			C
			45A4J5-6	52				.20	NO			
A 12	1	7.80	45A4P1-C4	99				.20	NO			E
			45A4J5-10	47				.20	NO			

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 13	1	8.20	45A4P1-C3	98				.20	NO			E
			45A4J5-11	46				.20	NO			
A 14	1	9.80	45A4P1-G4	223				.20	NO			C
			45A4J5-13	44				.20	NO			
A 15	1	6.00	45A4P1-S6	127				.20	NO			A
			45A4J7-14	81				.20	NO			
A 16	1	6.80	45A4P1-H4	112				.20	NO			C
			45A4J7-15	78				.20	NO			
A 17	1	6.00	45A4P1-R6	237				.20	NO			B
			45A4J7-16	77				.20	NO			
A 18	1	7.20	45A4P1-S3	124				.20	NO			A
			45A4J7-18	73				.20	NO			
A 19	1	6.60	45A4P1-S2	123				.20	NO			A
			45A4J7-19	72				.20	NO			
A 20	1	7.40	45A4P1-S5	126				.20	NO			A
			45A4J6-3	66				.20	NO			
A 21	1	11.50	45A4P1-A1	104				.20	NO			D
			45A4J4-1	32				.20	NO			
A 22	1	11.10	45A4P1-A2	103				.20	NO			D
			45A4J4-2	31				.20	NO			
A 23	1	13.00	45A4P1-P6	121				.20	NO			B
			45A4J4-12	25				.20	NO			
A 24	1	12.00	45A4P1-H6	116				.20	NO			C
			45A4J4-9	28				.20	NO			

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 25	1	14.20	45A4P1-K3	227				.20	NO			C
			45A4J3-3	19				.20	NO			
A 26	1	14.20	45A4P1-H3	113				.20	NO			C
			45A4J3-5	18				.20	NO			
A 27	1	17.80	45A4P1-S4	125				.20	NO			A
			45A4J2-3	8				.20	NO			
A 28	7	3.50	45A4J12-6	155				.25	YES			A
			45A4J6-2	68				.25	YES			
A 30	1	16.70	45A4P1-P3	117				.20	NO			B
			45A4J8-7	208				.20	NO			
A 31	7	15.50	45A4P1-R1	234				.25	YES			B
			45A4J9-7	189				.25	YES			
A 32	1	16.60	45A4P1-P2	119				.20	NO			B
			45A4J8-4	206				.20	NO			
A 33	1	17.00	45A4P1-P1	118				.20	NO			B
			45A4J8-1	203				.20	NO			
A 34	1	16.50	45A4P1-S1	122				.20	NO			A
			45A4J9-19	201				.20	NO			
A 35	1	15.00	45A4P1-G6	225				.20	NO			C
			45A4J9-11	194				.20	NO			
A 36	1	13.50	45A4P1-F6	220				.20	NO			C
			45A4J9-4	186				.20	NO			
A 37	1	12.70	45A4P1-M3	231				.20	NO			C
			45A4J10-9	182				.20	NO			

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 38	1	11.80	45A4P1-M2	115				.20	NO			C
			45A4J10-2	174				.20	NO			
A 39	1	12.00	45A4P1-M1	230				.20	NO			C
			45A4J10-1	173				.20	NO			
A 40	1	8.00	45A4P1-N6	233				.20	NO			C
			45A4J12-9	159				.20	NO			
A 41	1	7.00	45A4P1-M6	232				.20	NO			C
			45A4J12-2	151				.20	NO			
A 42	1	8.00	45A4P1-L6	229				.20	NO			C
			45A4J12-1	150				.20	NO			
A 43	1	4.00	45A4P1-A6	102				.20	NO			D
			45A4J13-20	149				.20	NO			
A 44	1	8.00	45A4P1-G1	221				.20	NO			C
			45A4J13-17	146				.20	NO			
A 45	1	6.40	45A4P1-G5	224				.20	NO			C
			45A4J13-13	140				.20	NO			
A 46	1	7.00	45A4P1-K1	226				.20	NO			C
			45A4J13-12	139				.20	NO			
A 47	1	6.00	45A4P1-C1	96				.20	NO			E
			45A4J13-11	138				.20	NO			
A 48	1	5.60	45A4P1-C2	97				.20	NO			E
			45A4J13-10	137				.20	NO			
A 49	1	7.00	45A4P1-H1	114				.20	NO			C
			45A4J13-9	136				.20	NO			

LEAD IDENT		WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A	50	1	5.60	45A4P1-D1	105A				.20	NO			C
				45A4J13-6	133				.20	NO			
A	51	1	4.90	45A4P1-F5	108				.20	NO			C
				45A4J13-4	131				.20	NO			
A	52	1	6.00	45A4P1-D2	106				.20	NO			C
				45A4J13-1	128				.20	NO			
A	53	7	20.90	45A4P1-R2	120				.25	YES			B
				45A4J13-7	134A				.25	YES			
A	54	1	3.00	45A4J7-3	93				.20	NO			E
				45A4J13-2	129				.20	NO			
A	55	7	5.90	45A4J7-7	88A				.25	YES			A
				45A4J12-5	154				.25	YES			
A	56	7	5.00	45A4J5-7	51				.25	YES			A
				45A4J11-10	171				.25	YES			
A	57	7	6.20	45A4J5-7	51A				.25	YES			E
				45A4J10-5	177				.25	YES			
A	58	7	5.00	45A4J6-10	58				.25	YES			E
				45A4J7-7	89				.25	YES			
A	59	1	6.50	45A4J5-2	56				.20	NO			E
				45A4J7-3	93A				.20	NO			
A	60	7	8.50	45A4P1-R2	120A				.25	YES			B
				45A4J5-7	50				.25	YES			
A	61	1	3.00	45A4E-2	215				.20	NO			B
				45A4J13-7	134				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR B | SHEET 9 OF 18

MIL 2084 4-63

LEAD IDENT		WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A	62	1	2.75	45A4J7-14	80				.20	NO			A
				45A4J13-14	142				.20	NO			
A	63	1	15.00	45A4P1-S6	127A				.20	NO			A
				45A4J9-14	196				.20	NO			
A	64	1	4.75	45A4J9-14	197				.20	NO			A
				45A4J4-15	21				.20	NO			
A	65	1	6.20	45A4J7-14	80A				.20	NO			E
				45A4J5-14	43				.20	NO			
A	66	1	6.00	45A4J7-15	79				.20	NO			E
				45A4J13-15	143A				.20	NO			
A	67	1	6.25	45A4J5-15	42				.20	NO			E
				45A4J13-15	143				.20	NO			
A	68	1	2.75	45A4J7-16	76				.20	NO			A
				45A4J13-16	144				.20	NO			
A	69	1	13.75	45A4P1-R6	121A				.20	NO			B
				45A4J4-13	24				.20	NO			
A	70	1	5.00	45A4J4-13	23				.20	NO			A
				45A4J9-16	198				.20	NO			
A	71	1	2.75	45A4J9-16	199				.20	NO			E
				45A4J3-14	13				.20	NO			
A	72	1	1.75	45A4J3-14	14				.20	NO			E
				45A4J3-18	11				.20	NO			
A	73	1	6.20	45A4J5-16	39				.20	NO			E
				45A4J7-16	76A				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR B | SHEET 10 OF 18

MIL 2084 4-63

LEAD IDENT		WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A	74	1	4.75	45A4J7-17	75				.20	NO			E
				45A4J12-10	160				.20	NO			
A	75	1	5.75	45A4J7-18	74				.20	NO			E
				45A4J5-18	37				.20	NO			
A	76	1	3.00	45A4J7-18	74A				.20	NO			A
				45A4J13-18	147				.20	NO			
A	77	1	2.75	45A4J7-19	71				.20	NO			E
				45A4J6-9	59				.20	NO			
A	78	1	3.50	45A4J7-19	71A				.20	NO			A
				45A4J13-19	148A				.20	NO			
A	79	1	2.25	45A4J5-19	35				.20	NO			A
				45A4J11-9	169				.20	NO			
A	80	1	5.25	45A4J11-9	170				.20	NO			A
				45A4J13-19	148				.20	NO			
A	81	1	5.00	45A4J7-9	86				.20	NO			A
				45A4J12-3	152				.20	NO			
A	82	1	4.75	45A4J7-12	83				.20	NO			A
				45A4J12-4	153				.20	NO			
A	83	1	2.50	45A4J7-20	70				.20	NO			E
				45A4J6-7	62				.20	NO			
A	84	1	4.25	45A4J6-3	67				.20	NO			E
				45A4J11-3	163				.20	NO			
A	85	7	1.25	45A4J10-6	165A				.25	YES			A
				45A4J11-2	162				.25	YES			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR B | SHEET 11 OF 18

MIL 2084 4-63

LEAD IDENT		WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A	86	7	3.00	45A4J6-5	64				.25	YES			A
				45A4J12-6	156				.25	YES			
A	87	1	3.00	45A4J6-8	61				.20	NO			E
				45A4J12-8	158				.20	NO			
A	88	1	2.25	45A4J5-20	33				.20	NO			C
				45A4J11-7	167				.20	NO			
A	89	1	4.50	45A4J5-9	48				.20	NO			A
				45A4J10-3	175				.20	NO			
A	90	1	4.25	45A4J5-12	45				.20	NO			A
				45A4J10-4	176				.20	NO			
A	91	1	4.25	45A4J5-17	38				.20	NO			E
				45A4J10-10	183				.20	NO			
A	92	7	3.25	45A4J11-5	165				.25	YES			A
				45A4J10-6	179				.25	YES			
A	93	1	3.00	45A4J11-8	168				.20	NO			A
				45A4J10-8	181				.20	NO			
A	94	1	3.25	45A4J4-8	29				.20	NO			E
				45A4J3-7	17				.20	NO			
A	95	1	4.75	45A4J4-11	26				.20	NO			E
				45A4J3-20	10				.20	NO			
A	96	1	4.00	45A4J4-10	27				.20	NO			E
				45A4J3-17	12				.20	NO			
A	97	1	2.50	45A4J3-2	20				.20	NO			A
				45A4J9-1	185				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR B | SHEET 12 OF 18

MIL 2084 4-63

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 98	1	2.25	45A4J3-8	16				.20	NO			C
			45A4J9-6	188				.20	NO			
A 99	1	3.00	45A4J3-9	15				.20	NO			A
			45A4J9-13	195				.20	NO			
A 100	7	3.00	45A4J2-5	6				.25	YES			A
			45A4J8-10	211				.25	YES			
A 101	1	3.00	45A4J2-7	4				.20	NO			A
			45A4J9-20	202				.20	NO			
A 102	1	2.75	45A4J2-8	3				.20	NO			A
			45A4J8-9	210				.20	NO			
A 103	1	3.25	45A4J9-9	192				.20	NO			A
			45A4J8-2	204				.20	NO			
A 104	1	3.25	45A4J9-10	193				.20	NO			A
			45A4J8-3	205				.20	NO			
A 105	1	3.25	45A4J9-19	200				.20	NO			A
			45A4J2-9	2				.20	NO			
A 106	7	4.50	45A4J9-7	190				.25	YES			A
			45A4J8-11	212				.25	YES			
A 108	1	6.50	45A4J1-21	214				.12	NO		2	E
			45A4J2-6	5				.20	NO			
A 109	1	6.50	45A4J1-20	214				.12	NO		2	E
			45A4J2-4	7				.20	NO			
A 110	1	12.00	45A4J1-2	214				.12	NO		2	E
			45A4J4-7	30				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR B	SHEET 13 OF 18

MIL 2084 4-63

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 111	6	2.20	45A4J1-1	214				.12	NO		2	
			45A4E2	215				.20	NO			
A 112	1	15.50	45A4J1-25	214				.12	NO		2	C
			45A4J5-8	49				.20	NO			
A 113	1	16.50	45A4J1-33	214				.12	NO		2	C
			45A4J5-5	53				.20	NO			
A 114	1	16.50	45A4J1-36	214				.12	NO		2	C
			45A4J6-6	63				.20	NO			
A 115	1	16.00	45A4J1-35	214				.12	NO		2	C
			45A4J6-4	65				.20	NO			
A 116	1	19.50	45A4J1-26	214				.12	NO		2	E
			45A4J7-8	87				.20	NO			
A 117	1	20.00	45A4J1-34	214				.12	NO		2	E
			45A4J7-5	91				.20	NO			
A 118	1	19.00	45A4J1-32	214				.12	NO		2	A
			45A4J13-5	132				.20	NO			
A 119	1	18.50	45A4J1-24	214				.12	NO		2	A
			45A4J13-8	135				.20	NO			
A 120	1	15.50	45A4J1-19	214				.12	NO		2	B
			45A4J12-7	157				.20	NO			
A 121	1	15.50	45A4J1-11	214				.12	NO		2	B
			45A4J12-11	161				.20	NO			
A 122	1	13.50	45A4J1-27	214				.12	NO		2	C
			45A4J11-4	164				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR B	SHEET 14 OF 18

MIL 2084 4-63

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 123	1	13.50	45A4J1-28	214				.12	NO		2	C
			45A4J11-6	166				.20	NO			
A 124	1	10.50	45A4J1-31	214				.12	NO		2	B
			45A4J9-5	187				.20	NO			
A 125	1	12.00	45A4J1-18	214				.12	NO		2	C
			45A4J10-7	180				.20	NO			
A 126	1	12.00	45A4J1-10	214				.12	NO		2	C
			45A4J10-11	184				.20	NO			
A 127	1	10.50	45A4J1-23	214				.12	NO		2	B
			45A4J9-8	191				.20	NO			
A 128	1	7.00	45A4J1-9	214				.12	NO		2	B
			45A4J8-5	207				.20	NO			
A 129	1	6.50	45A4J1-17	214				.12	NO		2	B
			45A4J8-8	209				.20	NO			
A 130	6	2.20	45A4J1-29	214				.12	NO		2	
			45A4E2	215				.20	NO			
A 131	6	2.20	45A4J1-38	214				.12	NO		2	
			45A4E2	215				.20	NO			
A 132	7	5.25	45A4J9-7	189A				.25	YES			A
			45A4J2-10	1				.25	YES			
A 133	7	2.75	45A4J2-2	9				.25	YES			E
			45A4J8-10	211A				.25	YES			
A 134	1	17.60	45A4P1-B1	95A				.20	NO			E
			45A4R1-1	184A				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR B	SHEET 15 OF 18

MIL 2084 4-63

LEAD IDENT	WIRE MATL ITEM	LEAD LG	CIRCUIT PT FROM (A) TO (B)	TERM. AREA NO.	JKT STRIP LG	SHLD STRIP LG	LEAD CUT LG	INS STRIP LG	TIN	NOTE ONE, FIG	ACCESSORY ITEMS	REMARKS
A 135	1	17.60	45A4P1-B2	95B				.20	NO			E
			45A4R1-2	184B				.20	NO			

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR B	SHEET 16 OF 18

MIL 2084 4-63

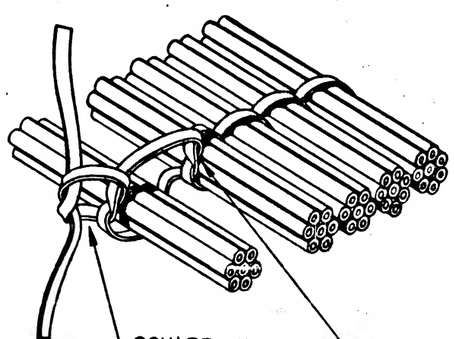


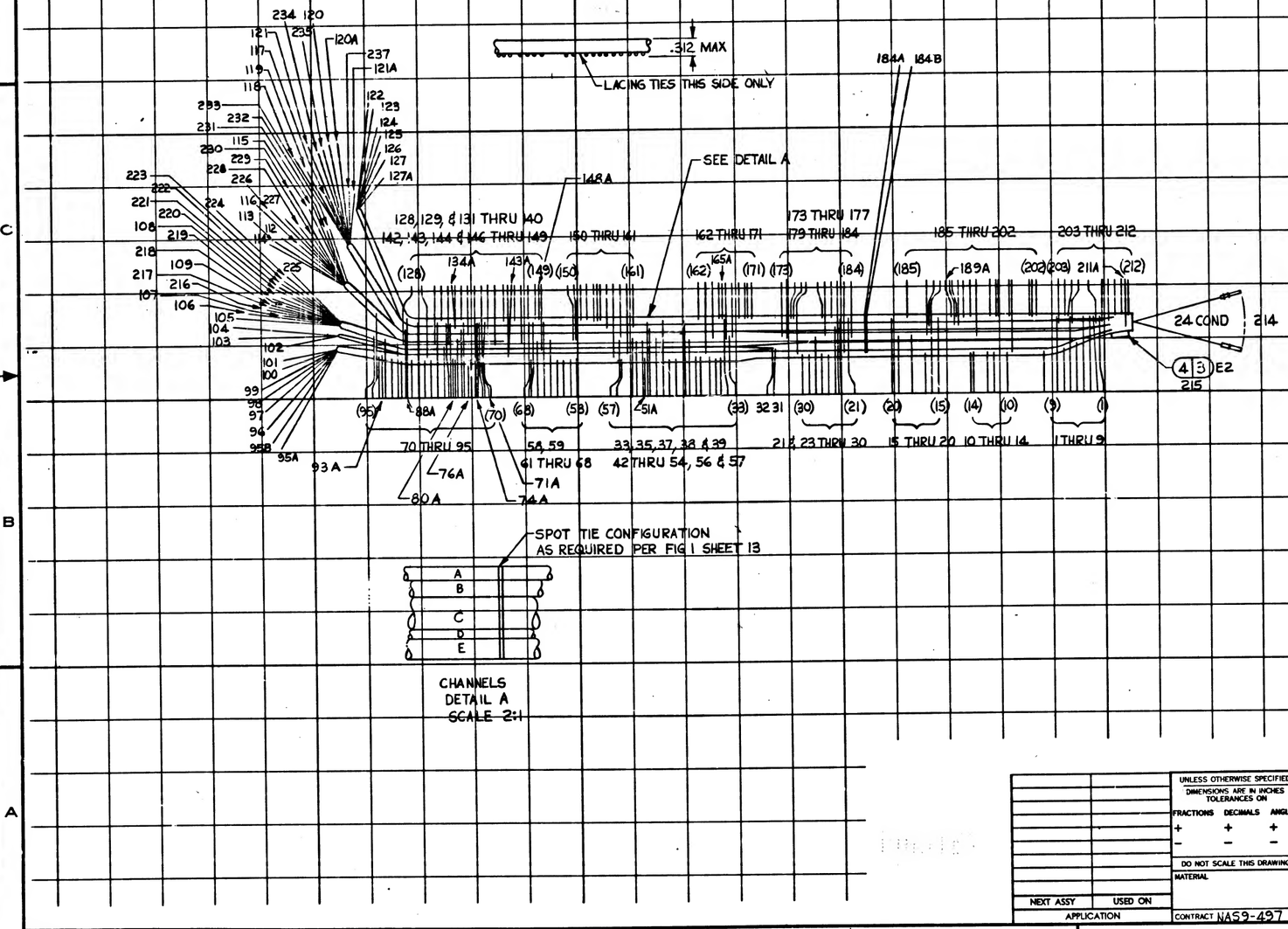
FIGURE 1
MULTIPLE SPOT TIE

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR	SHEET 17 OF 18

MIL 3004 4-63

8 | 7 | 6 | 5 | 4 | 3 | B | 1008271 | 2 | 1

REVISIONS 10446				
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.
		SEE SHEET 1 FOR REVISION RECORD			



NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS + − DECIMALS + − ANGLES + −
DO NOT SCALE THIS DRAWING
MATERIAL
CONTRACT NAS9-497

AC SPARK PLUG DIVISION, GMC
MILWAUKEE, WISCONSIN
ACSP PN
DRAWN R. Schwabe DATE 7 OCT 64
CHECKED 28 OCT 64
APPROVAL 28 Oct 64
APPROVAL 28 Oct 64
NASA APPROVAL 6-2-65
MIT APPROVAL 6-2-65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS A
(TRAY 4)

CODE IDENT NO. | SIZE D | 1008271
SCALE 1:1 | SHEET 18 OF 18

MIL 10770-F

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

PENNANT NOTE — GENERAL NOTES

TDRR 14446 NOV 24 1964

NOTE	
1	SEE CONDUCTOR CHART PENNANT NOTE 1.
2	SEE CONDUCTOR CHART PENNANT NOTE 2.
3	INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
4	MARK CONDUCTOR IDENTIFICATION PER ND1002019.
5	SPACING OF CONDUCTOR IDENTIFICATION SHALL BE EVERY 1.2 INCHES.
6	SPIRALLING OF THE MARKING IS ALLOWED.
7	LACE HARNESS USING ITEM 5
8	IDENTIFY USING DRAWING NO. AND REVISION LETTER PER MIL-STD-130 (ES-267).
9	Y OR N IN TINNED COLUMN INDICATES YES OR NO.
10	GRID MODULE IS 1 INCH.
11	UNLESS OTHERWISE SPECIFIED --- FEATURE CENTERLINES ARE LOCATED WITHIN + OR - .12 INCH. END OF HOOKUP WIRES OR ACCESSORIES ARE LOCATED WITHIN + OR - .06 INCH.
12	BREAKOUTS OF INDIVIDUAL OR GROUPS OF CONDUCTORS ARE MINIMUM CONFIGURATION.
13	VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING.
14	IN CONDUCTOR CHART CONDUCTOR LENGTHS ARE FOR REFERENCE ONLY
15	INSTALL ITEM 2 PER ND

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR +	SHEET 2 OF 14

MIL 2084 4-63

PENNANT NOTE — GENERAL NOTES

TDRR 14446 NOV 24 1964

NOTE	
16	INSTALL ITEMS 3 AND 4 PER ND

TOLERANCE CHART. UNLESS OTHERWISE SPECIFIED ---

APPLICABLE LENGTH FOR WIRE OR CABLE. STRIP WIRE. STRIP JACKET. CUT WIRE OR CUT SHIELD.	TOLERANCE STRIP WIRE	STRIP JACKET	CUT WIRE	CUT SHIELD
UNDER 1 INCH	+.03-.00	+.06-.06	+.06-.06	+.06-.06
1 INCH TO 6 INCHES	+.06-.00	+.25-.25	+.25-.25	+.25-.25
6 INCHES TO 6 FEET		+.50-.50	+.50-.50	+.50-.50
OVER 6 FEET				

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR +	SHEET 3 OF 14

MIL 2084 4-63

PENNANT NOTE — LIST OF MATERIALS

TDRR 14446 NOV 24 1964

NOTE	ITEM	QTY	PART NO	DESCRIPTION
13	1	AR	1010639- 2	WIRE, 77 FEET 5.8 IN. TOTAL LENGTH
13	2	24	1010738- 2	CONTACT, ELEC
13	3	1	1010476-168	INSULATION, SLEEVING, ELEC, HEAT SHRINK
13	4	1	1010711- 1	SPLICE REDUCER
13	5	AR	MIL-T-713	LACING TAPE, TYPE P, CLASS 2, BLACK (ES-2732 NO. 18)
	6	AR	MIL-W-16878/1B-24-19STND	WIRE-WHITE, 6.6 IN TOTAL LENGTH.
	7	AR	MIL-W-16878/1B-20-19STND	WIRE-WHITE, 8 FT 3.1 IN. TOT. LG

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE-NONE	REV LTR +	SHEET 4 OF 14

MIL 2084 4-63

TDRR 14446 NOV 24 1964

APPLICATION — USED ON / NEXT ASSY

REVISIONS 1/2/66

SYM	DESCRIPTION	DATE	APPROVAL

REV STATUS OF SHEETS: REV | SHEET | 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Christian 26 OCT 64

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN

ACSP PN

DRAWN R. Schwab DATE 7 OCT 64

CHECKED C. Erickson 26 OCT 64

APPROVAL J. Young 28 OCT 64

APPROVAL [illegible] 31 OCT 64

NASA APPROVAL [illegible]

MIT APPROVAL [illegible]

CONTRACT NAS 9-497

WIRING HARNESS A (TRAY 4)

CODE IDENT NO. 1008271 SIZE A REV

SCALE — SHEET 1 OF 14

INCHES 0 1 2 PHOTOGRAPHING SCALE ONLY

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	FROM: TIN	FROM: TERMINATION SPEC. ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	TO: TIN	TO: TERMINATION SPEC. ITEM NO.	TO NO.	
A 19	1	660 45A4P1-S2	20N		123	45A4J7-19	20N		72	A
A 20	1	740 45A4P1-S5	20N		126	45A4J6- 3	20N		66	A
A 21	1	1150 45A4P1-A1	20N		104	45A4J4- 1	20N		32	D
A 22	1	1110 45A4P1-A2	20N		103	45A4J4- 2	20N		31	D
A 23	1	1300 45A4P1-P6	20N		121	45A4J4-12	20N		25	B
A 24	1	1200 45A4P1-H6	20N		116	45A4J4- 9	20N		28	C
A 25	1	1420 45A4P1-K3	20N		227	45A4J3- 3	20N		19	C
A 26	1	1420 45A4P1-H3	20N		113	45A4J3- 5	20N		18	C
A 27	1	1780 45A4P1-S4	20N		125	45A4J2- 3	20N		8	A
A 28	7	350 45A4J12- 6	25Y		155	45A4J6- 2	25Y		68	A
A 30	1	1670 45A4P1-P3	20N		117	45A4J8- 7	20N		208	B
A 31	7	1550 45A4P1-R1	25Y		234	45A4J9- 7	25Y		189	B
A 32	1	1660 45A4P1-P2	20N		119	45A4J8- 4	20N		206	B
A 33	1	1700 45A4P1-P1	20N		118	45A4J8- 1	20N		203	B
A 34	1	1650 45A4P1-S1	20N		122	45A4J9-19	20N		201	A
A 35	1	1500 45A4P1-G6	20N		225	45A4J9-11	20N		194	C
A 36	1	1350 45A4P1-F6	20N		220	45A4J9- 4	20N		186	C
A 37	1	1270 45A4P1-M3	20N		231	45A4J10- 9	20N		182	C

1> THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2> DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 6 OF 14

MIL 2089 - 4-65 WIR

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	FROM: TIN	FROM: TERMINATION SPEC. ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	TO: TIN	TO: TERMINATION SPEC ITEM NO.	TO NO.	
A 38	1	1180 45A4P1-M2	20N		115	45A4J10- 2	20N		174	C
A 39	1	1200 45A4P1-M1	20N		230	45A4J10- 1	20N		173	C
A 40	1	800 45A4P1-N6	20N		233	45A4J12- 9	20N		159	C
A 41	1	700 45A4P1-M6	20N		232	45A4J12- 2	20N		151	C
A 42	1	800 45A4P1-L6	20N		229	45A4J12- 1	20N		150	C
A 43	1	400 45A4P1-A6	20N		102	45A4J13-20	20N		149	D
A 44	1	800 45A4P1-G1	20N		221	45A4J13-17	20N		146	C
A 45	1	640 45A4P1-G5	20N		224	45A4J13-13	20N		140	C
A 46	1	700 45A4P1-K1	20N		226	45A4J13-12	20N		139	C
A 47	1	600 45A4P1-C1	20N		96	45A4J13-11	20N		138	E
A 48	1	550 45A4P1-C2	20N		97	45A4J13-10	20N		137	E
A 49	1	700 45A4P1-H1	20N		114	45A4J13- 9	20N		136	C
A 50	1	560 45A4P1-D1	20N		105	45A4J13- 6	20N		133	C
A 51	1	490 45A4P1-F5	20N		108	45A4J13- 4	20N		131	C
A 52	1	600 45A4P1-D2	20N		106	45A4J13- 1	20N		128	C
A 53	7	2090 45A4P1-R2	25Y		120	45A4J13- 7	25Y		134	AB
A 54	1	300 45A4J7- 3	20N		93	45A4J13- 2	20N		129	E
A 55	7	590 45A4J7- 7	25Y		88	45A4J12- 5	25Y		154	A

1> THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2> DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 7 OF 14

MIL 2089 - 4-65 WIR

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	FROM: TIN	FROM: TERMINATION SPEC. ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	TO: TIN	TO: TERMINATION SPEC ITEM NO.	TO NO.	
A 1	1	340 45A4P1-D6	20N		109	45A4J7- 1	20N		95	C
A 2	1	420 45A4P1-F3	20N		218	45A4J7- 4	20N		92	C
A 3	1	200 45A4P1-D5	20N		217	45A4J7- 6	20N		90	C
A 4	1	300 45A4P1-C6	20N		101	45A4J7-10	20N		85	E
A 5	1	340 45A4P1-C5	20N		100	45A4J7-11	20N		84	E
A 6	1	520 45A4P1-G3	20N		222	45A4J7-13	20N		82	C
A 7	1	430 45A4P1-K4	20N		228	45A4J7- 2	20N		94	C
A 8	7	560 45A4P1-R2	25Y		235	45A4J7- 7	25Y		88	B
A 9	1	870 45A4P1-D4	20N		216	45A4J5- 1	20N		57	C
A 10	1	780 45A4P1-F4	20N		219	45A4J5- 4	20N		54	C
A 11	1	880 45A4P1-D3	20N		107	45A4J5- 6	20N		52	C
A 12	1	780 45A4P1-C4	20N		99	45A4J5-10	20N		47	E
A 13	1	820 45A4P1-C3	20N		98	45A4J5-11	20N		46	E
A 14	1	980 45A4P1-G4	20N		223	45A4J5-13	20N		44	C
A 15	1	600 45A4P1-S6	20N		127	45A4J7-14	20N		81	A
A 16	1	680 45A4P1-H4	20N		112	45A4J7-15	20N		78	C
A 17	1	600 45A4P1-R6	20N		237	45A4J7-16	20N		77	B
A 18	1	720 45A4P1-S3	20N		124	45A4J7-18	20N		73	A

1> THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2> DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 5 OF 14

MIL 2089 - 4-65 WIR

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	ITEM NO.	FROM: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	FROM: TIN	FROM: TERMINATION SPEC. ITEM NO.	FROM NO.	TO: CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT	TO: TIN	TO: TERMINATION SPEC ITEM NO.	TO NO.	
A 56	7	500 45A4J5- 7	25Y		51	45A4J11-10	25Y		171	A
A 57	7	620 45A4J5- 7	25Y		51	45A4J10- 5	25Y		177	E
A 58	7	500 45A4J6-10	25Y		58	45A4J7- 7	25Y		89	E
A 59	1	650 45A4J5- 2	20N		56	45A4J7- 3	20N		93	E
A 60	7	850 45A4P1-R2	25Y		120	45A4J5- 7	25Y		50	B
A 61	1	300 45A4E- 2	20N		215	45A4J13- 7	20N		134	B
A 62	1	275 45A4J7-14	20N		80	45A4J13-14	20N		142	A
A 63	1	1500 45A4P1-S6	20N		127	45A4J9-14	20N		196	A
A 64	1	475 45A4J9-14	20N		197	45A4J4-15	20N		21	A
A 65	1	620 45A4J7-14	20N		80	45A4J5-14	20N		43	E
A 66	1	600 45A4J7-15	20N		79	45A4J13-15	20N		143	E
A 67	1	625 45A4J5-15	20N		42	45A4J13-15	20N		144	E
A 68	1	275 45A4J7-16	20N		76	45A4J13-16	20N		24	B
A 69	1	1375 45A4P1-R6	20N		121	45A4J4-13	20N		198	A
A 70	1	500 45A4J4-13	20N		23	45A4J9-16	20N		13	E
A 71	1	275 45A4J9-16	20N		199	45A4J3-14	20N		11	E
A 72	1	175 45A4J3-14	20N		14	45A4J3-18	20N		76	E
A 73	1	620 45A4J5-16	20N		39	45A4J7-16	20N		76	E

1> THE STD CONDUCTOR TERMINATION FIGURES ARE PER
2> DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 8 OF 14

MIL 2089 - 4-65 WIR

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	CONDUCTOR INDIVIDUAL LENGTH ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.	
A 92	7	32545A4J11- 5	25Y			165	45A4J10- 6	25Y		179	A
A 93	1	30045A4J11- 8	20N			168	45A4J10- 8	20N		181	A
A 94	1	32545A4J4- 8	20N			29	45A4J3- 7	20N		17	E
A 95	1	47545A4J4-11	20N			26	45A4J3-20	20N		10	E
A 96	1	40045A4J4-10	20N			27	45A4J3-17	20N		12	E
A 97	1	25045A4J3- 2	20N			20	45A4J9- 1	20N		185	A
A 98	1	22545A4J3- 8	20N			16	45A4J9- 6	20N		188	C
A 99	1	30045A4J3- 9	20N			15	45A4J9-13	20N		195	A
A 100	7	30045A4J2- 5	25Y			6	45A4J8-10	25Y		211	A
A 101	1	30045A4J2- 7	20N			4	45A4J9-20	20N		202	A
A 102	1	27545A4J2- 8	20N			3	45A4J8- 9	20N		210	A
A 103	1	32545A4J9- 9	20N			192	45A4J8- 2	20N		204	A
A 104	1	32545A4J9-10	20N			193	45A4J8- 3	20N		205	A
A 105	1	32545A4J9-19	20N			200	45A4J2- 9	20N		2	A
A 106	7	45045A4J9- 7	25Y			190	45A4J8-11	25Y		212	A
A 108	1	65045A4J1-21	12N		2	214	45A4J2- 6	20N		5	E
A 109	1	65045A4J1-20	12N		2	214	45A4J2- 4	20N		7	E
A 110	1	12004 5A4J1- 2	12N		2	214	45A4J4- 7	20N		30	E

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MIL 2085 - 4-65 WIR

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 10 OF 14

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	CONDUCTOR INDIVIDUAL LENGTH ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.	
A 111	6	22045A4J1- 1	12N		2	214	45A4E2	20N		215	
A 112	1	15504 5A4J1-25	12N		2	214	45A4J5- 8	20N		49	C
A 113	1	16504 5A4J1-33	12N		2	214	45A4J5- 5	20N		53	C
A 114	1	16504 5A4J1-36	12N		2	214	45A4J6- 6	20N		63	C
A 115	1	16004 5A4J1-35	12N		2	214	45A4J6- 4	20N		65	C
A 116	1	19504 5A4J1-26	12N		2	214	45A4J7- 8	20N		87	E
A 117	1	20004 5A4J1-34	12N		2	214	45A4J7- 5	20N		91	E
A 118	1	19004 5A4J1-32	12N		2	214	45A4J13- 5	20N		132	A
A 119	1	18504 5A4J1-24	12N		2	214	45A4J13- 8	20N		135	A
A 120	1	15504 5A4J1-19	12N		2	214	45A4J12- 7	20N		157	B
A 121	1	15504 5A4J1-11	12N		2	214	45A4J12-11	20N		161	B
A 122	1	13504 5A4J1-27	12N		2	214	45A4J11- 4	20N		164	C
A 123	1	13504 5A4J1-28	12N		2	214	45A4J11- 6	20N		166	C
A 124	1	10504 5A4J1-31	12N		2	214	45A4J9- 5	20N		187	B
A 125	1	12004 5A4J1-18	12N		2	214	45A4J10- 7	20N		180	C
A 126	1	12004 5A4J1-10	12N		2	214	45A4J10-11	20N		184	C
A 127	1	10504 5A4J1-23	12N		2	214	45A4J9- 8	20N		191	B
A 128	1	7004 5A4J1- 9	12N		2	214	45A4J8- 5	20N		207	B

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MIL 2085 - 4-65 WIR

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 11 OF 14

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	CONDUCTOR INDIVIDUAL LENGTH ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.	
A 74	1	47545A4J7-17	20N			75	45A4J12-10	20N		160	E
A 75	1	57545A4J7-18	20N			74	45A4J5-18	20N		37	E
A 76	1	30045A4J7-18	20N			74A	45A4J13-18	20N		147	A
A 77	1	27545A4J7-19	20N			71	45A4J6- 9	20N		59	E
A 78	1	35045A4J7-19	20N			71A	45A4J13-19	20N		148	A
A 79	1	22545A4J5-19	20N			35	45A4J11- 9	20N		169	A
A 80	1	52545A4J11- 9	20N			170	45A4J13-19	20N		148	A
A 81	1	50045A4J7- 9	20N			86	45A4J12- 3	20N		152	A
A 82	1	47545A4J7-12	20N			83	45A4J12- 4	20N		153	A
A 83	1	25045A4J7-20	20N			70	45A4J6- 7	20N		62	E
A 84	1	42545A4J6- 3	20N			67	45A4J11- 3	20N		163	E
A 85	7	12545A4J10- 6	25Y			165A	45A4J11- 2	25Y		162	A
A 86	7	30045A4J6- 5	25Y			64	45A4J12- 6	25Y		156	A
A 87	1	30045A4J6- 8	20N			61	45A4J12- 8	20N		158	E
A 88	1	22545A4J5-20	20N			33	45A4J11- 7	20N		167	C
A 89	1	45045A4J5- 9	20N			48	45A4J10- 3	20N		175	A
A 90	1	42545A4J5-12	20N			45	45A4J10- 4	20N		176	A
A 91	1	42545A4J5-17	20N			38	45A4J10-10	20N		183	E

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MIL 2085 - 4-65 WIR

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 9 OF 14

GTD

WIRING HARNESS A

1008271

TDRR 14446

NOV 24 1964

CONDUCTOR NUMBER	CONDUCTOR INDIVIDUAL LENGTH ITEM NO.	CONDUCTOR INDIVIDUAL LENGTH [2]	FROM CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	FROM T I N [2]	FROM TERMINATION SPEC. [1] ITEM NO.	FROM NO.	TO CUT WIRE OR SHIELD STRIP WIRE OR JACKET CIRCUIT POINT [2]	TO T I N [2]	TO TERMINATION SPEC [1] ITEM NO.	TO NO.	
A 129	1	65045A4J1-17	12N		2	214	45A4J8- 8	20N		209	B
A 130	6	22045A4J1-29	12N		2	214	45A4E2	20N		215	
A 131	6	22045A4J1-38	12N		2	214	45A4E2	20N		215	
A 132	7	52545A4J9- 7	25Y			189A	45A4J2-10	25Y		1	A
A 133	7	27545A4J2- 2	25Y			9	45A4J8-10	25Y		211	E
A 134	1	17604 5A4P1-B1	20N			95A	45A4R1- 1	20N		184	E
A 135	1	17604 5A4P1-B2	20N			95B	45A4R1- 2	20N		184	E

[1] THE STD CONDUCTOR TERMINATION FIGURES ARE PER

[2] DIMENSIONS ARE IN INCHES AND TWO PLACE DECIMALS.

MIL 2085 - 4-65 WIR

MANNED SPACECRAFT CENTER HOUSTON, TEXAS | SIZE A | 1008271

SCALE - NONE | REV LTR + | SHEET 12 OF 14

INCHES
PHOTOGRAPHIC SCALE ONLY

TDRR 14446 NOV 24 1964

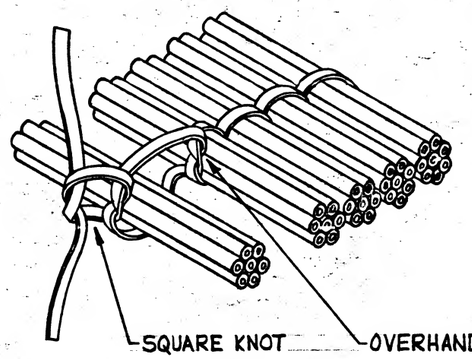
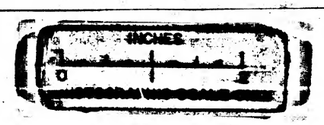


FIGURE 1
MULTIPLE SPOT TIE

MANNED SPACECRAFT CENTER HOUSTON, TEXAS	SIZE A	1008271
SCALE - NONE	REV LTR	SHEET 13 OF 14

MIL 2064 4-65



1008271

REVISIONS					
SYM	ZONE	DESCRIPTION	CHG NO.	DATE	APPD.

.312 MAX

LACING TIES THIS SIDE ONLY

SEE DETAIL A

234 120 121 235 120A 237 117 121A 119 118 122 123 124 125 126 127 127A 233 232 231 115 230 229 228 226 223 222 221 224 116 227 220 113 108 219 112 114 218 109 225 217 216 107 106 105 104 103 102 101 100 99 98 97 96 95B 95A 93A

148A 184A 184B

128, 129, & 131 THRU 140
142, 143, 144 & 146 THRU 149
150 THRU 161
162 THRU 171
173 THRU 177
179 THRU 184
185 THRU 202
203 THRU 212

(126) 134A 143A (149) (150) (161) (162) 165A (171) (173) (184) (185) 189A (202) (203) 211A (212)

24 COND 214

4 3 E2 215

(95) 88A (70) (68) (58) (57) 51A (33) 32 31 (30) (21) (20) (15) (14) (10) (5) (1)

70 THRU 95 | 54, 59 | 61 THRU 68 | 33, 35, 37, 38 & 39 | 42 THRU 54, 56 & 57 | 21 & 23 THRU 30 | 15 THRU 20 | 10 THRU 14 | 1 THRU 9

76A 80A 71A 74A

SPOT TIE CONFIGURATION
AS REQUIRED PER FIG 1 SHEET 13

A B C D E

CHANNELS
DETAIL A
SCALE 2:1

MASTER

NEXT ASSY	USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES + + + − − −	AC SPARK PLUG DIVISION, GMC MILWAUKEE, WISCONSIN
APPLICATION		DO NOT SCALE THIS DRAWING	ACSP PN
		MATERIAL	DRAWN R. Schwanke DATE 7 OCT 64
		CONTRACT NAS9-497	CHECKED [illegible] 20OCT 64
			APPROVAL [illegible] 21OCT64
			APPROVAL [illegible] 25OCT64
			NASA APPROVAL [illegible]
			MIT APPROVAL [illegible] 24NOV64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WIRING HARNESS A
(TRAY 4)

CODE IDENT NO. | SIZE D | 1008271

SCALE 1:1 | SHEET 14 OF 14